



CrossTalk

November 2025 66 Years Of Service To Amateur Radio & Our Community Issue 66 : 11

A

2025 Club Officers

President :	Jonathan Pearce WB2MNF	Trustees - 4 Year Term	
Vice President :	Ronald Block NR2B	Charles Lanard KD2EIB	(2022-2025)
Treasurer :	John O'Connell K2QA	Sheldon Parker K2MEN	(2023-2026)
Recording Secretary :	John Zaruba Jr K2ZA	Len Rust W2LJR	(2024-2027)
Corresponding Secretary :	Michael Resnick N2WOQ	Earl Moore KC2NCH	(2025-2028)

Directors - 3 Year Term

Chris Prioli AD2CS	(2023-2025)	Bill Price NJ2S	(2024-2026)
James Wright N2GXJ	(2023-2025)	Jeffrey Garth WB2ZBN	(2025-2027)
Al Arrison KB2AYU	(2024-2026)	Frank Romeo N3PUU	(2025-2027)

General Membership Meeting

Wednesday, November 05, 2025 @ 1900 Hours
In-Person & **ZOOM : 914 7364 1808, 843147**

Tech Saturday Forum

Saturday, November 08, 2025 @ 0900 Hours
W2MMD Clubhouse

License Testing Session

Thursday, November 13, 2025 @ 1900 Hours
W2MMD Clubhouse

Board of Directors Meeting

Wednesday, November 19, 2025 @ 1900 Hours
W2MMD Clubhouse

Dinner @ The Clubhouse

Wednesday, November 26, 2025
W2MMD Clubhouse

Happy Thanksgiving!

Thursday, November 27, 2025

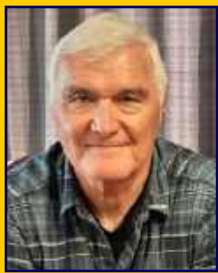
Tuesday Afternoon 2M Net @ 1200 Hours

Thursday Night 2M Net @ 2000 Hours

Monday & Thursday Night 40M Net @ 1930 Hours
7.170 MHz (+/- 5 or 10 kHz)

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President's Letter

Jon Pearce WB2MNF



November 2025

October was likely a record month for GCARC member activity, with high event attendance and exciting activities that underscore our Club's vitality. As we move into the cooler months, let's recap the highlights and look ahead to the events on the horizon.

October 1, 2025 General Membership Meeting

Our October 1st General Membership Meeting likely set a new attendance record, with 35 members in the room and 24 joining via Zoom - a total of 59 participants! Credit goes to **Ron Block NR2B** for securing speaker **Spencer Webb W2SW**, who delivered a fascinating presentation on transmission lines. **Frank Romeo N3PUU** and **Chris Prioli AD2CS** deserve equal praise for managing the Zoom setup, ensuring seamless remote access for participants each month. This hybrid approach continues to broaden our reach and foster collaboration across the Club, especially as our Club's new member outreach is extending further from the meeting areas.

October 4, 2025 Tech Saturday Forum - APRS

John Zaruba K2ZA's October Tech Saturday on "Introduction to APRS" drew what was likely a record crowd, filling every available Clubhouse seat and reflecting the growing enthusiasm for this messaging mode. He delved into the history of APRS and highlighted many underutilized features, such as messaging and status reporting, sparking interest in its broader potential. Subsequent discussions have highlighted additional opportunities to implement APRS in support of EmComm activities so additional collaboration and group activities are likely as we identify many of the uses of this mode.

We're also making steady progress reassembling the Clubhouse APRS station to transmit weather data from our on-site weather station and creating a gateway for APRS packets to the <https://aprs.fi> site and for other reporting methods, along with combining APRS and other forms of external data for depiction of emergency situations. If there's interest we may also create future sessions on setting up personal APRS home stations with Direwolf software.

CPR Courses

Josh Boylan KE2FSC led two successful CPR and First Aid sessions on the morning and afternoon of Sunday, October 5th, with about 9 members and guests attending each session. All participants earned certification in CPR and AED use and were introduced to the Clubhouse first aid kit, stocked by Josh for on-site needs. This skill set is important given the age of many of our members, as having trained CPR rescuers may be critical at some point. Josh's extensive actual experience as an EMT combined with his "day job" training skills showed, and we were fortunate to have his expertise as an instructor and as a member of the Club.

President's Letter - Continued on page 3

EME Contest Success

The EME team - **Al Arrison KB2AYU**, **Frank Romeo N3PUU**, and **John O'Connell K2QA** - shone during the October ARRL EME Contest, setting up the 2.4-meter dish to secure five contacts by bouncing signals off the moon. This session used a new equipment configuration, mounting the dish in the pipe sunk into the ground in front of the VHF room window and a new relay-driven switching network to combine TX and RX functions at the feed horn to use a single length of hardliner run under the trailer to the opposite side of the VHF room where the 1296 MHz equipment is installed. This made setup and teardown much easier. Unfortunately rain prevented operating on Saturday night and Sunday morning, but the contest continues on November 8th and 9th and we're already planning for that operation as well.

November 8, 2025 Tech Saturday Forum - DigiPi on Raspberry Pi

John Zaruba K2ZA returns on November 8th for a Tech Saturday presentation on the DigiPi suite of programs for Raspberry Pi computers - perfect for digital modes, APRS gateways, and packet setups. He'll guide us through installation and configuration, with practical tips for all skill levels. We're compiling a list of affordable Pi hardware for pre-purchase; watch your email for details if you'd like to set up your own rig. This session promises to spark some creative tinkering.

Holiday Dinner

Save the date for our Holiday Dinner on Wednesday, December 10, 2025 at 6:30 PM at the Lamp Post Diner in Clementon. Expect a delightful evening of food, conversation, and camaraderie. Sign-up details are in this month's CrossTalk - don't miss out, as space is limited!

The Clubhouse remains a hub of activity most Saturdays, so stop by for operating time, project help, or a chat. Your participation keeps GCARC moving as we head into the winter months.

73 de Jon WB2MNF



Welcome New Club Members :

Paul Jensen KC3LSU, a General Class from Hudgins, VA.

Bill McCourt WF1L, an Amateur Extra Class from Dover, DE.

Nicholas Reigel KE2DCD, an Amateur Extra Class from Cherry Hill, NJ.

We are glad to have you as a member of the Club and hope to see you regularly at Club meetings, events, and activities. Hope to see you at :

- The November 5th General Membership Meeting, either in-person or on ZOOM
- The November 8th Tech Saturday Forum @ the W2MMD Clubhouse
- The Board of Directors Meeting on November 19th
- The Dinner at the Clubhouse on November 26th

We also hope to “SEE” you on the “AIR” on the following nets :

- Sunday Night Skywarn 2 Meter Net @ 1930 Hours.
- Sunday Night ARES 2 Meter Net @ 2000 Hours.
- Tuesday Afternoon 2 Meter Net @ 1200 Hours.
- Monday & Thursday Night 40 Meter Nets on 7.170 MHz (+/- 5 or 10 kHz) @ 1930 Hours.
- Thursday Night Rag Chew 2 Meter Net @ 2000 Hours.

All 2 Meter Nets are on our 147.180 MHz (PL 131.8) repeater or on EchoLink W2MMD-R.

So you find our website confusing, can't find anything

I have created a page called “Quick Links”

**On this page you will find “Buttons” to some the most popular pages
I will add more as time goes on, but I hope this helps your journey navigating
through your Club Website!**

<https://gloucestercountync.weebly.com/quick-links.html>

Here is a preliminary slate of candidates for the 2026 Club Officer Elections. Voting will take place at the December 3, 2025 General Membership Meeting.

- President : Jonathan Pearce WB2MNF
- Vice President : Ron Block NR2B
- Treasurer : John O'Connell K2QA
- Recording Secretary : John Zaruba Jr K2ZA
- Corresponding Secretary : Michael Resnick N2WOQ

Director : (Vote For 2)

- Chris Prioli AD2CS
- James Wright N2GXJ

Trustee : (Vote For 1)

- Greg Ciraula K3GC (Candidate nominated from the floor)



General Membership Meeting

Wednesday, November 05, 2025 @ 1900 Hours

Pfeiffer Community Center

Simulcast Live Via ZOOM : **Meeting ID : 914 7364 1808; Passcode : 843147**

Join ZOOM Meeting Link : <https://bit.ly/3Pt4dLO>

Go to : <https://gloucestercountync.weebly.com/2025-content--activities--resources.html> to download the ZOOM log-on instructions PDF

VOIP Hurricane Net

By Dennis Dura K2DCD

This month, Dennis Dura K2DCD, will discuss the **VOIP Hurricane Net** creation and how it aids in the flow of critical information during times of disaster.

Saving Lives Through Technology and Teamwork

SKYWARN's core mission remains steadfast : To help protect lives and property through the vigilant identification and field evaluation of threatening weather and hazardous conditions. By facilitating the timely collection and dissemination of critical weather reports, we help the National Weather Service (NWS) and National Hurricane Center (NHC) act swiftly and effectively.



Unified Communications for Severe Weather Response

We're proud to announce a major advancement in our operational capabilities. The EchoLink Conference Server and IRLP Reflector have been successfully merged to form a unified VoIP Hurricane Net - providing a single, streamlined point of contact for field reports and coordination between NWS, NHC, and SKYWARN volunteers.

This integration eliminates duplication of effort and maximizes the utility of our resources. It's a leap forward in efficiency and accessibility for all involved.

Expanding Connectivity with VoIP Technologies

In addition to EchoLink and IRLP, the net can now accommodate other VoIP platforms such as :

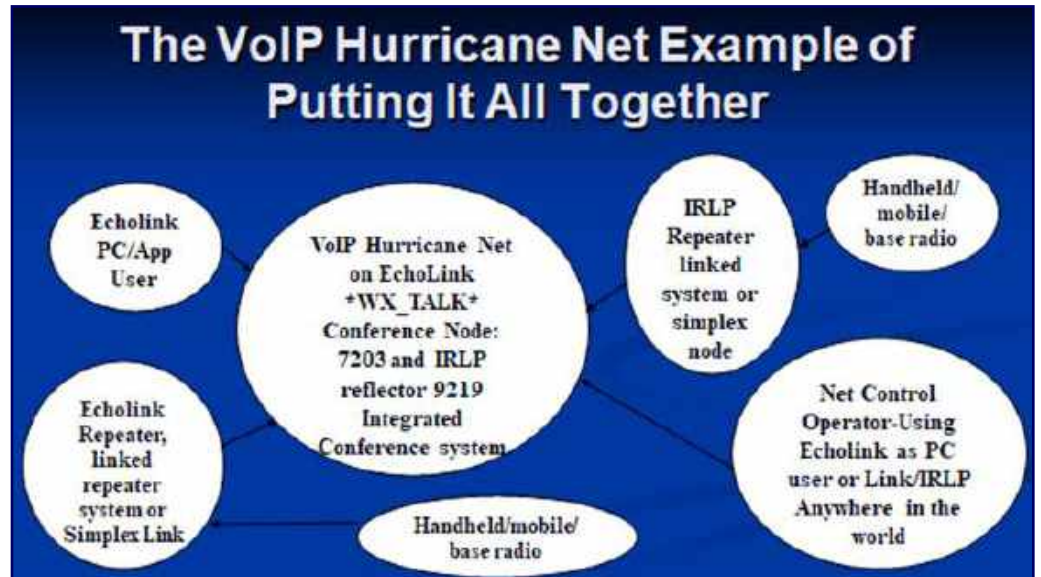
- AllStar
- DMR
- D-STAR
- Fusion
- Hamshack Hotline

These technologies can be brought online as needed, with future plans to fully integrate them into our system for even broader reach and resilience.

November 2025 General Membership Meeting - Continued on page 6

A Legacy of Collaboration

This initiative builds on the groundwork laid between 2002 - 2003, when EchoLink and IRLP hosted separate weather nets. In 2004, **Kevin Anderson KD5WX**, WX-TALK Net Manager, and **Danny Musten KD4RAA**, IRLP Raleigh Reflector Net Manager, joined forces to create the combined net we rely on today. Their vision and dedication - alongside countless volunteers - have made this program possible.



Website Features and Public Access

Our website serves as a vital hub for :

- **Reviewing the latest tropical bulletins and satellite imagery**
- **Learning VoIP Hurricane Net procedures**
- **Tracking net activations for land falling hurricanes**
- **Submitting weather observations that meet NHC/NWS reporting criteria**

Whether you're a Net Controller or a concerned citizen, this platform ensures you have the tools to stay informed and contribute meaningfully.

Full Activation During Tropical Threats

Whenever tropical weather threatens the U.S. mainland or coastal regions - primarily in the Atlantic, but also in the Eastern and Central Pacific - the VoIP WX-NET will be fully operational. Your participation and vigilance are crucial.

Come and join us at this month's General Membership Meeting.





Tech Saturday Forum

November 08, 2025 @ 0900 Hours

W2MMD Clubhouse

Forum Topic :

John Zaruba Jr K2ZA: Digi Pi & APRS

John Zaruba Jr K2ZA returns on November 8th for a Tech Saturday presentation on the Digi Pi suite of programs for Raspberry Pi computers - perfect for digital modes, APRS gateways, and packet setups. He'll guide us through installation and configuration, with practical tips for all skill levels.

Here is a shopping list if you want to get your materials ahead of time :

1. A Raspberry Pi, ideally a Pi Zero 2W, with GPIO pins (**Amazon** or **Adafruit**)
2. Radio Interface board, one of :
 - AIOC "All in One Cable" for Baofeng/Kenwood two-prong rigs **NA6D.com** (<http://bit.ly/3LcbIb7>) : \$35
 - Masters Communications DRA-Pi-Zero **MastersCommunications.com** (<http://bit.ly/47AWJ24>) : \$75
 - DigiPi Hat **elekitsorparts.com** (<http://bit.ly/4o8e8WO>) : \$40
 - DigiRig Mobile (not Lite) with proper cable **Digirig.net** (<http://bit.ly/3X6TeeE>)
 - Fe-Pi Audio Z v2 [x] 1 Fe-Pi Sound Card without kit **WB7FHC** (<http://bit.ly/4ofJ3Rf>) : \$34
 - With **N7EBB RIB** (<http://n7ebb.org>) : \$25
 - And GPIO stacking header **Adafruit** (<https://www.adafruit.com/product/2223>) (best) or **Amazon** (<http://bit.ly/435jERB>) : \$3
 - **Ferrite Bead** (<http://bit.ly/47j6Zx6>) around all the wires between the radio and the audio board : \$5

Optional display

- 1.3" small screen ST7789 (240x240) PiZero2W TFT display **Adafruit** (<http://bit.ly/3X30fxa>) or **Amazon** (<http://bit.ly/3Jx9BOx>) : \$16

Don't stress about the display, it is very much optional and can be added later.

If you haven't heard of **Adafruit** before, they are an excellent maker / hobbyist component supplier located in Brooklyn : <https://www.adafruit.com>

The Pi Zero2W uses micro USB connectors for I/O.

If you are going to use the All-In-one-Cable (AIOC), it has a USB-C connector so you will need a cable with the appropriate ends :

- **3FT USB C to Micro USB Data & Charge Cable** (<http://bit.ly/3WuHmmm>)

And if you'd like to use one of the very affordable USB-A GPS pucks for location data :

- **VK-162 G-Mouse USB GPS Dongle** (<http://bit.ly/4hTa9vb>)

Then you will need an OTG adapter :

- **JSAUX USB C to USB 3.0 Adapter** (<http://bit.ly/47LgHZ4>)

"Dinner @ The W2MMD Clubhouse"
Wednesday, November 26, 2025 @ 1800 Hours

GCARC Monthly VE Exam Testing Summary - October 2025

By Chris Prioli AD2CS

This month's VE session was rather strange, in that one of the candidates did not have an FRN and was unable to obtain one. This is due to the shutdown of our wonderful federal government as regards normal business operations. As of this writing, the government is still shut down, and this individual is still unable to obtain an FRN, and therefore is unable to get licensed. The VE session was held at the W2MMD Clubhouse and was administered by Volunteer Examiners as listed below, with Chris Prioli AD2CS serving as Team Liaison for the event :

- **Courtney Smith KD2SPJ**
- **Earl Moore KC2NCH;**
- **Mike Thompson KG4JYA**
- **John O'Connell K2QA**

The exam candidates, both of whom sat for and passed the Element 2 (Technician) exam were as follows :

- **Michael Schneck FRN 0037550332 of Pedricktown, NJ**
- **Chris Scalessa (no FRN) of Logan Township, NJ**

The VE Team proctored the exam sessions using completely electronic methodologies. This means that the candidates completed the exams online, and that all grading and submissions were done online as well.

The next regularly-scheduled VE session will be held on Thursday, 13 November 2025, at 1900 Hours at the W2MMD Clubhouse. The VE team will be using the ExamTools system to its fullest capability, within our current technological means.

It is important that all test candidates going forward will be advised, whenever possible, to pre-register and pre-pay for the exam online. Specifics of that process are explained at : <https://veteam.w2mmd.org>

GCARC VE Team : 2025 License Exam Monthly Summary

	Technician Class		General Class		Amateur Extra Class	
	Monthly	YTD	Monthly	YTD	Monthly	YTD
January	0	0	0	0	0	0
February	2	2	0	0	1	1
March	1	3	2	2	0	1
April	0	3	0	2	1	2
May	1	4	1	3	1	3
June	4	8	3	6	0	3
July	3	11	1	7	0	3
August	4	15	2	9	0	3
September	4	19	4	13	0	3
October	2	21	0	13	0	3
November						
December						

Membership Badges Ready For Pick-Up

*They can be picked up at the W2MMD Clubhouse or
at the monthly General Membership Meetings*

Dave Danichkin KD2UXC
Jon Davidson KE2DYD
Misael Fernandez KE2EBL
Jim Foster W3JNF

Gary Hewitt N2WHV *
Jim McCullough KE2BEL
Frank Parsinitz KD2GSY
Jack Snyder AI2D
Marian Yanka KE2GOL

The Clubhouse is open and accessible every Saturday from 0700 until 1600 Hours, and on the third and fourth Wednesday evening of each month as well as the second Thursday evening of each month from about 1700 until 2000 Hours.

The badges can also be picked up at any General Membership Meeting. They will be displayed at the Hospitality Table

If there is an asterisk (*) after your call sign above, your badge is a replacement and has a cost of \$5.00 payable to the Club at the time of pickup of the badge.



**Great turn out for the October 4, 2025 Tech
Saturday Forum with John Zaruba K2ZA talk-
ing about APRS**

New Members Support Group & Discord Channel

- Organized By Jim Beury KE2DRN
- Objective : To focus Club resources on the needs of newly licensed members
- Supported by “new_members” Discord Channel

Additional Support :

- Saturday Morning @ The W2MMD Clubhouse
- GCARC@MAILMAN.QTH.NET Club E-mail Reflector
- E-Mail President @ w2mmd.org



STEM Kids Operate In ARRL School Roundup

By Jon Pearce WB2MNF

The Woodruff Middle School STEM Club participated in the ARRL School Roundup contest on Wednesday, October 22, 2025 with three students who stayed after school to get their first HF radio contacts. After school at 2 PM we set up a 25-foot end-fed antenna, strung between a gutter pipe on the school building and a light post about 30 feet away - a less-than-ideal setup. Using a loaned FT-991A radio, we first tried the 40-meter band but heard no activity. Switching to 20 meters, we found many signals, including several contest participants. The students made contacts with other middle schools, elementary, and college stations, though some operators focused on earning contest points and kept conversations brief.

In 90 minutes, we made six contacts, with time spent explaining the process and technology to the students. This was the first on-air experience for all three students and also for the substitute teacher, who was filling in for the regular teacher, **Angela Metzger KE2DRJ**. Everyone was enthusiastic, and afterward we discussed ways to offer license training for interested students, despite challenges with after-school scheduling.

We hope to develop a plan to help these students get licensed.



DAs and DITs

>> Our Club family has lost another member! **Charlie Wahl Jr KC2STO** passed away on October 20, 2025. Condolences to his family and friends. Charlie will be missed!

What's happening in the ARRL Southern New Jersey Section??

Subscribe to the ARRL SNJ Section Groups.IO

<https://groups.io/g/ARRLSouthernNewJerseySection>

ADIF Logs Wanted When Operating As W2MMD @ The Clubhouse

By Jim Wright N2GXJ - Contact me via e-mail on Club Roster List

It is a common courtesy in ham radio to be able to QSL 2-way contacts made with other hams. We're pretty good about doing this for our field day contacts made each year, but are falling behind in this for contacts we make from the Clubhouse as W2MMD.

So here is the ask :

If you operate from the Clubhouse as W2MMD (e.g. on HF, UHF/VHF, or on Satellite, at Tech Saturday, or during contests or other), please email me the electronic log entries in ADIF format from the logger program you used for those contacts?

That way, just like I do following field day each year, I can get them uploaded to LOTW and to eQSL to offer the courtesy of an electronic QSL to those who make contact with us as W2MMD here in NJ.

Thank you

Need a ride to a Club meeting, event, or activity?

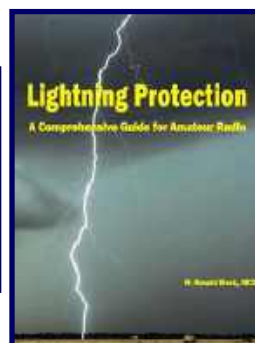
Just send a message to the Club's e-mail reflector asking if a member can pick you up

[GCARC <at> MAILMAN <dot> QTH <dot> NET](mailto:GCARC@MAILMAN.QTH.NET)

All Club members have access to this FREE e-mail service



Lightning Protection :
A Comprehensive Guide for Amateur Radio
Author : W. Ronald Block, NR2B
Contact : ron@wrblock.com
Website : www.wrblock.com



Regional (Atlantic & Hudson Divisions) Hamfests & Events

November 09, 2025 : Long Island Mobile Amateur Radio Club, Hamfest & Electronics Fair, Levitown Hall, 201 Levitown Parkway, Hicksville, NY. www.limarc.org

November 22, 2025 : New Jersey Antique Radio Club, NJARC Fall Swap Meet & Hamfest, Parsippany Police Athletic League, 33 Baldwin Road, Parsippany, NJ. www.njarc.org

2025 Holiday Dinner

Wednesday, December 10, 2025

6PM Gathering

7PM Dinner

Lamp Post Diner

1378 Little Gloucester Road

Clementon, NJ 08021

Adults : \$35.00 (Plus PayPal Fee)

Children : \$21.00 (Plus PayPal Fee)

For The Menu & To Register, Please Go To :

<https://registration.w2mmd.org/wpregp/gcarc-holiday-dinner>

December 3, 2025 is the deadline to register



Full Beaver Moon : Wednesday, November 5, 2025 @ 0819 Hours

This was the time when beavers finished preparations for winter and retreated into their lodges. In the 1760s, Captain Jonathan Carver heard this Native American term during his travels. Also in the realm of animals, Deer Rutting Moon (Dakota, Lakota) refers to the mating season. Digging/Scratching Moon is a Tlingit term for when bears dig their winter dens. Whitefish Moon (Algonquin) describes the spawning time for this fish. As cold temperatures deepen, the terms Frost Moon (Cree, Assiniboine) and Freezing Moon (Anishinaabe) were also used.

Old Farmer's Almanac - www.almanac.com



The Education Connection

By Chris Prioli AD2CS - chris@ad2cs.com
www.ad2cs.com



November 2025

It is with great misgivings that I contemplate the fact that almost a month into the crisis, our federal government is seemingly no closer to any resolution of the budgetary problems that caused the current shutdown of many federal agencies. What bothers me is the fact that we encourage candidates to take the exams for licensing as ham operators, but the folks in DC are not doing their part to make licensure a reality for these folks. Take our last VE session as an example. We had two exam candidates, both of whom passed their Element 2 exams, and are anxiously awaiting the day when they can legally get on the air. I would hate to see individuals such as these get discouraged by the apparent lack of concern on the part of our legislators in Washington.

Of course, and this is an important point, anyone who was testing for an upgrade can, once the exam has been passed, exercise the privileges of the upgraded license whether the folks in DC get their act together or not... at least for a year from the date of exam passage. Let's hope that this situation does not continue that long. Anyway, all that any such upgrade candidates need to do is to append their call sign with a suffix of /**AG** for General upgrades or /**AE** for Amateur Extra upgrades when using the new privileges, indicating that the exam has been passed and that the operator is awaiting the FCC posting of the upgrade to the ULS database.

The one-year limitation is due to the fact that the CSCE (Certificate of Successful Completion of Exam) carries a one-year expiration to its validity. Unfortunately, if the government shutdown does last that long, anyone caught in the middle would, under the current rules, have to re-test at the expiration of the CSCE. I would hope that the FCC would grant an extension that matches the shutdown period in length for such individuals, as it is clearly not the faults of the candidates that the FCC was unable to process the paperwork. We will have to wait to see what developments along those lines.

Another gotcha is that anyone with an expired license during this shutdown cannot legally transmit on the air at all. This is something that can become problematic. Despite the fact that a license renewal may have been submitted, it is not in fact valid and in place until the FCC posts it to the ULS database. That leaves any such hams out in the cold, unable to get on the air until the shutdown has been resolved and the renewal has been processed and posted. For shame!

Moving along... I am still looking for our next group build project idea. If you have an idea for a project that would be suitable - and practical - for our Club to take on, send it along to me so that I can kick it around with Jon and the BOD. We have one idea that we are working on right now, something that will be of interest to Meshtastic and LoRa users. More about that later.

In the meanwhile, I am updating my lesson materials for all three license levels, and getting ready to move ahead with the new 2026-2030 Element 2 materials. It seems to me as if I just updated to the 2022-2026 Technician question pool, and here we are moving into another pool change. Time does move on.

That's it for now... See you next month!

Josh Boylan KE2FSC led two successful CPR and First Aid sessions on the morning and afternoon of Sunday, October 5th, with about 9 members and guests attending each session. All participants earned certification in CPR and AED use and were introduced to the Clubhouse first aid kit, stocked by Josh for on-site needs. This skill set is important given the age of many of our members, as having trained CPR rescuers may be critical at some point. Josh's extensive actual experience as an EMT combined with his "day job" training skills showed, and we were fortunate to have his expertise as an instructor and as a member of the Club.



New ZOOM Guidelines For General Membership Meetings

To enhance the experience for everyone attending the General Membership Meeting, whether in person or via Zoom, the Board of Directors has established some guidelines for Zoom participants. These guidelines are designed to ensure that everyone can focus on the meeting while also allowing Zoom participants to interact before the meeting starts.

Here are the guidelines:

- **Before the Meeting :**
 - ◆ Zoom participants are welcome to keep their cameras and microphones on to chat among themselves before the meeting begins. During this time, the Zoom audio will not be broadcast to the general audience, and local audio will not be connected to the Zoom meeting.
- **During the Meeting :**
 - ◆ Just before the Pledge of Allegiance, a reminder will be posted for Zoom participants to mute their microphones and turn off their cameras. This ensures that all Zoom participants will see the meeting camera instead of another Zoom participant's camera. Participants in the room never see the cameras of the Zoom participants.
 - ◆ Zoom participants can use the "**Raise Your Hand**" button to ask questions or make comments at appropriate times during the meeting. The Zoom operator will notify the moderator, who will recognize the comment or question at the right time.
- **After the Business Meeting :**
 - ◆ The Zoom audio will be muted immediately after the business meeting concludes to prevent any disruptions to the in-person audience from the PA speakers.

Please adhere to these guidelines to ensure a smooth and enjoyable meeting experience for everyone. Following these protocols will help us maintain an inclusive and focused environment for both in-person and remote attendees. Thank you for your cooperation!



Tuesday Afternoon Net @ 1200 Hours



147.180 MHz (+) (131.8) Repeater & EchoLink W2MMD-R

Here is the schedule for the upcoming weeks

Greg Ciraula K3GC : November 4, 2025
Steve Farney W2SEF : November 11, 2025
Rich Subers W2RHS : November 18, 2025
Jeff Garth WB2ZBN : November 25, 2025

Greg Ciraula K3GC : December 2, 2025
Steve Farney W2SEF : December 9, 2025
Rich Subers W2RHS : December 16, 2025
Jeff Garth WB2ZBN : December 23, 2025
Steve Farney W2SEF : December 30, 2025

If you would like to be a Net Control Station for this net, please contact Steve Farney W2SEF

VETERANS DAY



HONORING ALL WHO SERVED



Thursday Night Rag Chew Net @ 2000 Hours



147.180 MHz (+) (131.8) Repeater & EchoLink W2MMD-R

Here is the schedule for the upcoming weeks

Jeff Garth WB2ZBN : November 6, 2025
Mary Delemarre W2TDS : November 13, 2025
Gary Mirkin WA3SVW : November 20, 2025
Happy Thanksgiving : November 27, 2025

Jeff Garth WB2ZBN : December 4, 2025
Mary Delemarre W2TDS : December 11, 2025
Gary Mirkin WA3SVW : December 18, 2025
Merry Christmas : December 25, 2025

If you would like to be a Net Control Station for this net, please contact Jeff Garth WB2ZBN



Gloucester County Skywarn Net

The Gloucester County Skywarn Net is held every Sunday @ 1930 Hours on the 147.180 MHz (+) (131.8) Repeater & EchoLink W2MMD-R

All Are Welcome To Participate

Net Control Stations : Steve Broomhead KB2RTZ & Jeff Garth WB2ZBN



Gloucester County ARES Net

The Gloucester County ARES Net is held every Sunday @ 2000 Hours on the 147.180 MHz (+) (131.8) Repeater & EchoLink W2MMD-R

All are welcome to participate

Net Control Stations :

Steve Farney W2SEF; Bob Keogh KD2NEC; Karl Frank W2KBF; Al Arrison KB2AYU;
Gary Mirkin WA3SVW; Greg Ciraula K3GC; & Todd Woodward KD2ESH

Todd Woodward KD2ESH : November 2, 2025

Karl Frank W2KBF : November 9, 2025

Al Arrison KB2AYU : November 16, 2025

Greg Ciraula K3GC : November 22, 2025

Gary Mirkin WA3SVW : November 30, 2025

Greg Ciraula K3GC : December 7, 2025

Todd Woodward KD2ESH : December 14, 2025

Karl Frank W2KBF : December 21, 2025

Steve Farney W2SEF : December 28, 2025

Anyone who is interested in joining the Gloucester County ARES Team, is invited to contact
Bob Keogh at KD2NEC @ QSL.NET

Monday & Thursday Night 40 Meter Net @ 1930 Hours

7.170 MHz (Plus or Minus 5 to 10 kHz)

NCS : Jim Clark KA2OSV

Current Website Updates : Go to this page to find out the latest changes & updates on our W2MMD Website

<https://gloucestercountyarcs.weebly.com/current-website-updates.html>



ARRL Learning Center

<https://learn.arrl.org>

Discover how to make Amateur Radio your own.

Online courses from the ARRL Learning Center provide ARRL members with additional instruction and training for getting on the air, emergency communications, and electronics and technology



At The Repair Bench...

A monthly column describing a recent repair bench event.

By Chris Prioli AD2CS - chris@ad2cs.com - www.ad2cs.com

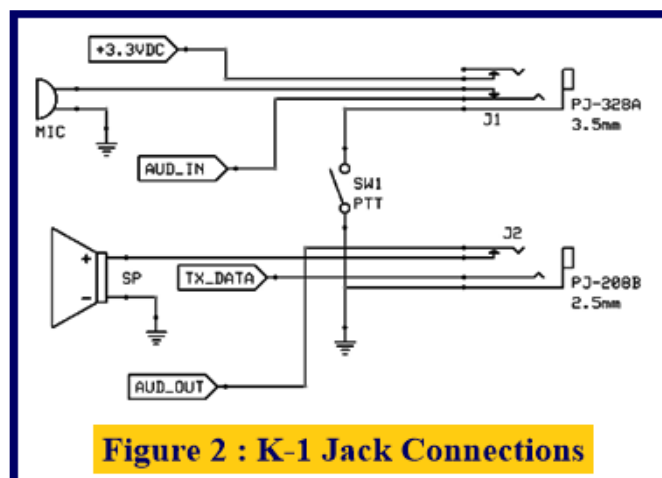
Baofeng BF-F8HP HT Transceiver - November 2025

Not very long ago, one of our fellow Club members had come to me with a radio that held some particular nostalgic value for him, as it was the first amateur-band radio he had ever owned. The problem was that the radio apparently had no TX audio output, though it showed full output power when transmitting. The problem was that no modulated audio was passed through in the resulting transmission.

My initial thought, after asking him if the radio had ever been dropped, was to look at the microphone solder joints where it is mounted to the main board in the radio. I disassembled the radio and carefully inspected, then tested, the microphone solder points, to find that it was OK, and that the problem was apparently elsewhere. I then had a bright idea, and decided to test the radio in transmit mode using an appropriate headset plugged into the K-1 jack pair on the side of the radio. Lo and behold, the audio came through in the transmission just fine when a headset was used, but not without one. That told me that the problem was most likely either a bad solder joint at one of the two jacks, or a failed switch within the mic jack. The owner decided that he wanted to repair the radio, so I took it to my shop for repair.

Once there, I opened up the radio again and then took a good look at the solder joints for the two jacks. This type of radio uses a pair of jacks mounted directly adjacent to each other, with a unique inter-connection between the two jacks. One, the upper jack, is a 3.5mm (1/8") TRS jack having five terminals - meaning that it includes two switches. The other jack is a 2.5mm (3/32") TRS jack with four terminals, having only one internal switch. The pinout for the jack set is shown in **Figure 2**. This two-plug jack configuration is known in the amateur radio field as a "**K-1 jack**" and is generally considered a single jack, even though it is usually really made up of two discrete jacks installed side-by-side on the PCB.

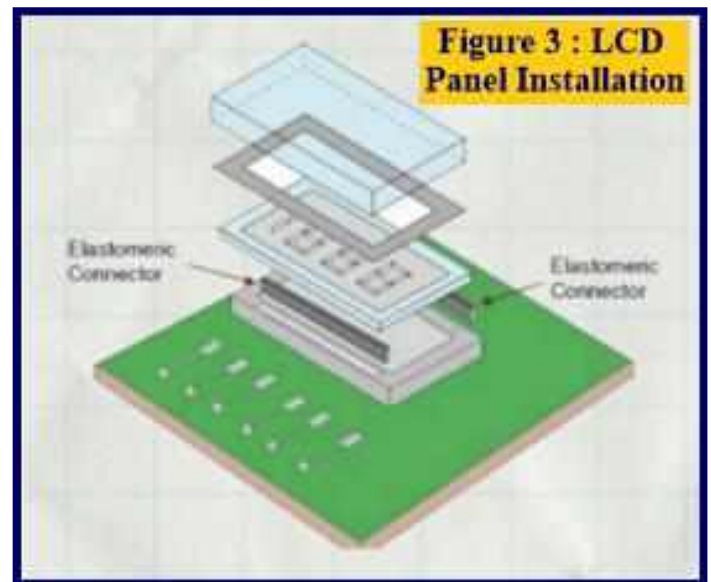
The jacks used in the Baofeng radios are actually quite commonly used, so I stock a quantity of each of them. Replacement of the jacks was straight-forward and simply required desoldering the jacks. However, in a strange twist, the PCB does not have the typical round holes in the connecting pads for these jacks. Instead, the holes are actually slots that are very closely sized to the mating tabs on the jacks. The jacks that are used, the PJ-328A (3.5mm) and the PJ-208B (2.5mm) are often sold as dual-use through-hole and surface-mount devices. This duality is accomplished simply by bending the connecting tabs either out to the side for surface-mount use, or straight down for through-hole applications.



At The Repair Bench - Continued on page 18

Disassembly of the BF-F8HP requires removal and replacement of the LCD display panel from the main board as well as desoldering of the antenna jack center conductor from the board. In reality, the antenna jack does not need to be desoldered for **disassembly**, but it sure makes re-assembly a more simplified task if it is desoldered.

Handling of the LCD panel calls for some care and absolute cleanliness. As is often the case with LCD panels, the connections to the panel are made through rubber connecting strips called “**zebra strips**” because they are frequently striped black and white when viewed on-edge. These strips are more properly known as “**elastomeric connectors**” and their use is illustrated at **Figure 3**. When installed, they must be clean - especially of skin oil - and carefully aligned with the edges of the LCD panel where the contact points are located, and with their mating contact pads on the PCB to which the LCD panel is mounted.



Very often, after being disassembled, upon reassembly the LCD panel has missing characters or even complete lines of dots missing in the array that forms the characters on the display. This can be corrected by disassembling, cleaning, and properly positioning the panel and the zebra strips again. Once properly installed, the full display will be restored.

Repairs to this radio will most often also require the desoldering of the speaker connecting wires from the main board, so that the radio housing can be separated from the chassis. Proper tools are also important, as despite the fact that these radios are Chinese-made products, they actually use JIS screws whose drive ends are easily stripped when the wrong screwdriver is used. The use of a JIS screwdriver is imperative when working on these radios. On reassembly, take care to reserve the two long screws for securement of the LCD panel frame to the main board and chassis. The shorter screws used in all of the other locations will not work here - they are too short and will not reach the threads in the chassis.

This was an extremely simple repair, especially because I had the correct parts on hand. I should point out that I had originally considered using a pair of jacks from a “**dead**” Baofeng BF-F8HP that was given to me for parts. However, this particular radio, a very early version of this model, used a different jack setup with round pins in a slightly different pattern than that of the subject radio. I think that I actually came across that before, which is why I had the correct jacks in stock. Due to their age and the fact that they are used as a pair, both connected and disconnected simultaneously, I decided to replace both jacks. Needless to say, post-repair the radio worked flawlessly.

While I would not normally recommend making a repair that costs more than the replacement cost of the radio, as I mentioned earlier, this particular radio has a certain nostalgic value to its owner, which made it worth the cost of repairs to him. It is really interesting how one can become attached to an innate piece of technology, but it does happen, and quite frequently at that.

See you next month!



Amateur Radio Emergency Services - November 2025

Resources - News - Updates

By Bob Keogh KD2NEC - kd2nec@qsl.net
Gloucester County Emergency Coordinator



National Traffic System® (NTS®)

During disasters or other emergencies, radiograms are used to communicate information critical to saving lives or property, or to inquire about the health or welfare of a disaster victim.

To get involved with NTS®, find your local NTS® affiliate on the air : **ARRL Net Directory Search** (<https://www.arrl.org/arrl-net-directory-search>)

Modernization of NTS® (The NTS® 2.0 Project)

The current National Traffic System® is comprised of dedicated operators well trained and practiced in the art of traffic handling. They participate in nets at the local, section, and area levels 365 days per year.

Yet we cannot ignore reality : The proliferation of low-cost/free telephone calls, text messaging, and the worldwide web means today's general public has many alternatives to traditional radiograms. As a result, much of today's NTS® traffic consists solely of amateur-to-amateur: "welcome to amateur radio," "license expiration" etc. In addition, there are serious questions as to the accuracy and reliability of our networks. Finally, it should be noted that some public agencies have never heard of NTS®; or, have begun creating their own backup messaging systems.

For more information regarding the modernization of NTS® visit **The NTS® 2.0 Project** (<https://NTS2.arrl.org>) webpage.

Sign up to receive The NTS® Letter : The NTS® Letter is published monthly and is free of charge to ARRL members. Members can subscribe at : <https://home.arrl.org/action/My-Account/Opt-In-Out>.

View all NTS® Letter Issues (<https://www.arrl.org/NTS-letter>) :

- **NTS® PowerPoint** : Check out this PowerPoint on the National Traffic System® including an intro to **National Traffic System® Digital** : [http://www.arrl.org/files/file/NTS Presentation 6-2012.ppt](http://www.arrl.org/files/file/NTS%20Presentation%206-2012.ppt))
- **NTS® Manual** : Read more about the purpose, policies, and procedures of the NTS® : [http://www.arrl.org/files/file/Public Service/NTS Manual2015.pdf](http://www.arrl.org/files/file/Public%20Service/NTS%20Manual2015.pdf)
- **Net Directory** : See how public-service nets that support the NTS® have been registered with the directory database : <http://www.arrl.org/arrl-net-directory>
- **NTS® Forms** : Forms related to traffic handling and the National Traffic System® : ARRL Radiogram, FSD-3, FSD-89, FSD-125, & FSD-218 : <http://www.arrl.org/public-service-field-services-forms>
- **NTS® Digital** : Visit this website about the National Traffic System® Digital : <http://NTS-digital.net>
- **Instructors Guide** : This guide is written for the volunteers who are willing to train Amateur Radio operators about traffic handling : [http://www.arrl.org/files/file/NTS/A GUIDE TO TRAINING TRAFFIC HANDLERS MASTER COPY with NCS.doc](http://www.arrl.org/files/file/NTS/A%20GUIDE%20TO%20TRAINING%20TRAFFIC%20HANDLERS%20MASTER%20COPY%20with%20NCS.doc)
- **Net Operations** : This PowerPoint Presentation explains amateur radio net operations : [http://www.arrl.org/files/file/Public Service/Net Operations Forum 2023.pptx](http://www.arrl.org/files/file/Public%20Service/Net%20Operations%20Forum%202023.pptx)

Club Member DMR IDs

Club Member	DMR ID
W2MMD Clubhouse	3198604
Michael Andrescavage N2ICV	3134044
Lance Appel KE2UC	3200487
Joshua Boylan KE2FSC	3216140
Steven Broomhead KB2RTZ	3218247
Alex Calabrese WA2ADS	3100583
Chuck Capasso WB2PGE	3169781
Matthew Carango N3QB	3169432
Todd Cecilio KA2YNT	3169458
Anthony Cerami N2OAC	3202759
Mark Clark N3QMJ	3102110
Norm Coltri K2NRC	3183851
Holden Correia-Fisher KD2JPV	3104911
Mike Covalski N2MMC	3134855
Walter Coward WX2E	3166863
Bob Demola KD2GFL	3134319
Doug Dersch KD2VQA	3193630
Thomas Distelcamp Sr KC2GYC	3110869
Glenn Dougherty N2YIO	3161836
Adam Duncan W3DUN	3202691
Herb Dyer KT2Y	3134907
Harry Elwell AD5TT	3128498
Misael Fernandez Jr KE2EBL	3214756
James Foster W3JNF	3142117
Karl Frank W2KBF	3146716
Glen Guenther KE2BUO	3202079
Melissa Guenther KE2BWZ	3202496
Deirdre Anne Hebert AD2GQ (AB1ST)	3133330
Gary Hewitt N2WHV	3134654
Paul Kaplan N2FOB	3134796
Chuck Lanard KD2EIB	3134298
Darren Malone KD2ALQ	3215227

Club Member	DMR ID
Gary Mirkin WA3SVW	3165494
Bill McCourt WF1L	3152173
Scott McNutt N3ADP	3189434
John Murrow KD2NHK	1134122
John Newman WB4YLM	3213273
Phil Nunzio WA3RGY	3134336
John O'Connell K2QA	3110610
Robert Pantazes W2ARP	3157208
Sheldon Parker K2MEN	3214037
Jonathan Pearce WB2MNF	3163415
Michael Pecorini K2MRP	3132996
Michael Pentimall KC3VTF	3203601
John Price III KD2QYC	3123583
Chris Prioli AD2CS	3195449
Nicholas Reigel KE2DCD	3128983
Michael Resnick N2WOQ	3215856
Frank Romeo N3PUU	3134935
Len Rust III W2LJR	3186225
Len Rust IV K2LJR	3196243
Dave Sheppard W2PAX	3112666
Cory Sickles WA3UVV	1142052
James Simeone KC2AOF	3134848
Stan Slachetka WA2JRZ	3213904
Court Smith KD2SPJ	3186243
Jackson Snyder AI2D	3164371
Rich Subers W2RHS	3204316
Brett Waller K2BKW (KC2UXQ)	3134261
Matt Wilson K2MFW	3134607
Bill Wood KD2OSJ	3197459
Jim Wright N2GXJ	3215168
John Zaruba Jr K2ZA	3134331
New Entries As Of 10/20/2025	

For more information, DMR links, and W2LJR's DMR presentations, go to :
<https://gloucestercountyarcs.weebly.com/dmr.html>

DMR Configuration Sequence

1. Obtain and Configure DMR ID :

- <https://www.radioid.net>

2. Download Contact List :

- <http://www.dmrcontacts.com>

3. Identify Repeater or Hotspot :

- <https://www.repeaterbook.com>

4. Define Talk Groups

- Numerical ID
- Text Name

<https://brandmeister.network/?page=talkgroups>

5. Create Channel

- Select Number
- Assign Name
- Select DMR ID
- Assign Frequency
 - ♦ Transmit
 - ♦ Receive
 - ♦ Bandwidth

- Power
- DMR Mode (Simplex/Repeater)
- TX Permit (Channel Free)
- Assign Talk Group
- Assign Color Code
 - ♦ Agreed Upon with Other Users
- Assign Time Slot
- Agreed Upon with Other Users

6. Create Zone

7. Add Channels to Zones

8. Configure Features

9. Upload Code Plug

10. Upload Contact List

If you recently changed your callsign, contact idteam@dmr-marc.net to have your DMR ID transferred to your new callsign.

A Club that goes above and beyond for their communities and for Amateur Radio, is what defines a Special Service Club (SSC).



They are the leaders in their Amateur Radio communities who provide active training classes, publicity programs, and actively pursue technical projects and operating activities.

GCARC has been an ARRL Affiliated Club since February 1960 and an SSC since April 2010.



Club Merchandise from the K2ZA Workshop
Contact John Zaruba Jr K2ZA at k2za@icloud.com
Go To : <https://gloucestercountyarcc.weebly.com/club-merchandise.html>



Gloucester County Amateur Radio Club
YouTube Channel

<https://www.youtube.com/@W2MMD>

My HF Antenna Install : Part Two

By Mary Delemarre W2TDS

This article is a follow-up to HF Antenna Install part 1 which appeared in the July 2025 CrossTalk. That article described the items purchased in addition to the Hustler 5-BTV antenna and detailed the first two days of installation efforts. The third installation day was originally scheduled for June 24th, but I canceled it when the forecast called for 101 °F temperature.

The next stage of the installation took place on Thursday, October 2nd. It was a perfect day for antenna work - temperatures in the 60s with low humidity. **Al Arrison KB2AYU** and **Lee Hafele WA2LH** returned, joined by **Chris Prioli AD2CS**, along with a lot of tools and enthusiasm.

We divided ourselves into two teams. While Al mowed the lawn in the area where the radials would be installed, the antenna and radial materials were brought outside. Chris set up a workstation to construct the radials (**Figure 1**), while Lee and Al worked on assembling the antenna (**Figure 2**). I helped Chris assemble thirty two 30 foot radials, of which we ultimately used thirty. The antenna team built the antenna and installed both the tilt and radial plates.

The PolyPhaser lightning protection was installed inside the house. The inside coax that had been previously installed for my VHF antenna was reused. The outside coax was connected to a copper ground rod (**Figure 3**). The PolyPhaser lightning protection and the inside coax cable connections are shown in **Figure 5**.

Once the antenna was assembled, the radials were attached to the radial plate. We used biodegradable anchor pins to keep the radials in place (**Figure 6**). The final step was tuning the antenna performing some on-air testing (**Figure 7**).

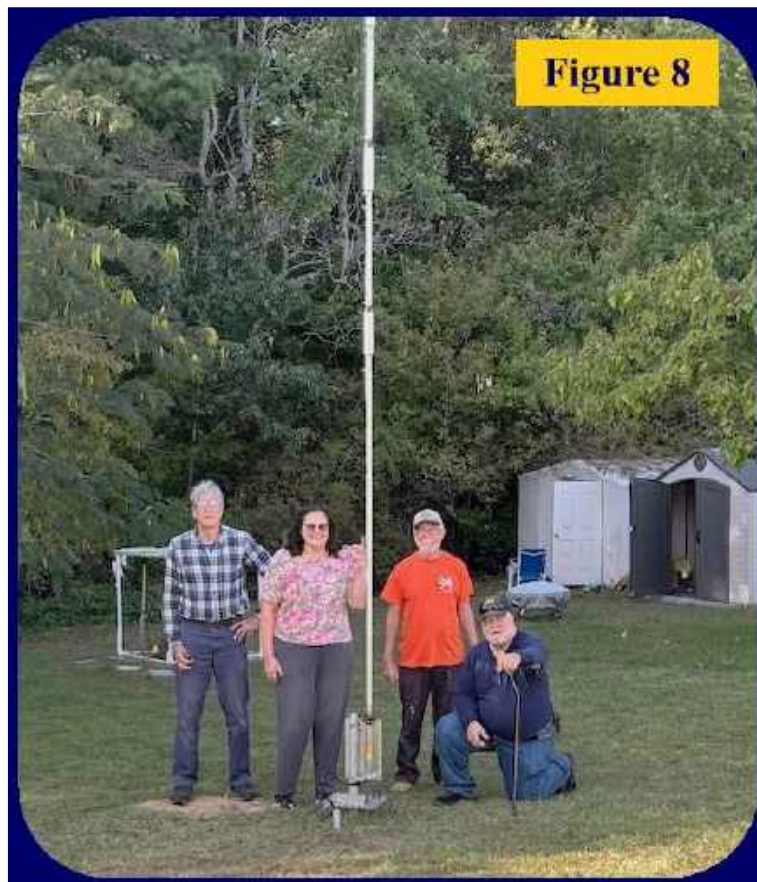
I made my first RF contact on October 2nd! I'm still setting up my shack for HF operation and recently discovered I can use the RTI software with my MacBook Air. I'm now researching logging programs compatible with macOS.

Next Steps :

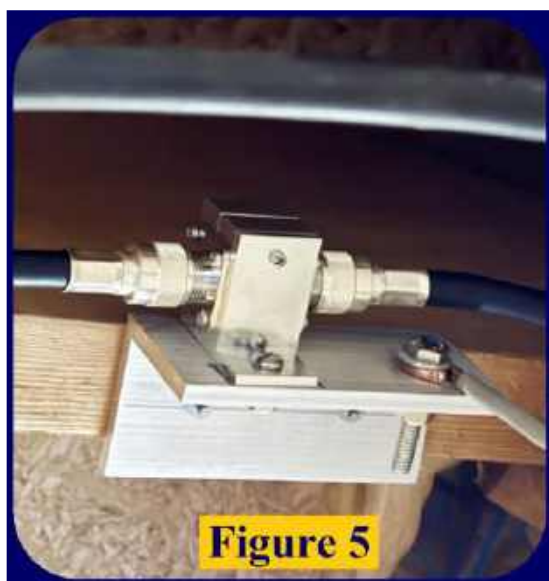
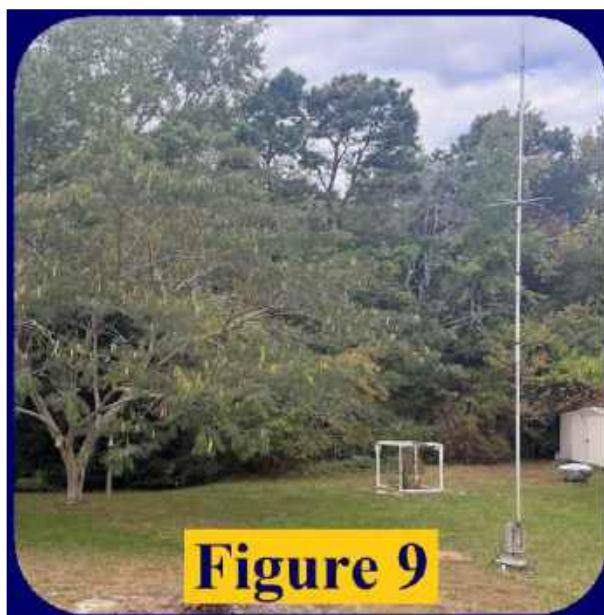
- Install macOS logging software
- Finish designing and printing QSL cards
- Set up rig to do FT8
- Celebrate with more HF QSOs!
- Install a second ground rod near the electric meter

Figures 8 & 9 are pictures of the team and the completed antenna.

Thank you Al, Lee, and Chris for making my HF antenna dreams come true!



My HF Antenna Install Part 2 - Continued on page 23



W2MMD EME Contest Operation Recap - October 2025

By Jon Pearce WB2MNF

Earth-Moon-Earth (EME) communication is a fascinating weak-signal mode on VHF/UHF bands. This year, several Club members expressed interest in trying it. Our EME team included **Al Arrison KB2AYU**, **Frank Romeo N3PUU**, **John O'Connell K2QA**, and me, with **Mike Thompson KG4JYA** assisting in setup and **Marc Federici WM2Y** joining for late-night operations during the contest.

Radio Equipment

Several years ago when equipping the VHF room we selected gear suitable for EME, including the Gemini 23 amplifier, which outputs 250 watts on 1296 MHz. Last year, we added a 2.4-meter collapsible mesh dish from Sublunar Systems with accompanying mounting tripod and tested it during the November 2024 EME contest. There we faced two major issues : the amplifier shut down with a "High SWR" error - even when connected to a dummy load - making it unusable, and manual dish rotation proved too cumbersome, highlighting the need for automated tracking.

In the months since, Al diagnosed the amplifier and adjusted a potentiometer to fix the SWR sensitivity, restoring full functionality. We also acquired the matching rotator, tripod, and controller from Sublunar for automatic moon tracking, which eliminated manual adjustments every 15 minutes. The initial mounting on the tripod was time-consuming and imprecise so we resolved it by embedding a 3-foot PVC pipe in concrete outside the Clubhouse VHF room window. A steel pipe slides into it, extending 4 feet above ground, providing a stable base for the rotator. This upgrade dramatically cut setup time.

In our previous operation we found that the dish front-loaded the rotator significantly indicating the need for a counterweight, which apparently had been omitted from the dish assembly instructions. Fortunately remediation was simple using a piece of scrap aluminum tubing from the heap next to the shed and mounting four "precision-weighted" bricks on the tubing with hose clamps. We adjusted the brick position to get approximately even balance on the rotator, which significantly lightened its load on the elevation rotator.

Connecting the Hardware

Feedline losses are high at 1296 MHz, so we optimized the setup to keep them minimal. Last year, we positioned the amplifier, transverter and rotator controller outside the VHF room window, feeding the transverter at its 28 MHz IF input. This shortened the 1296 MHz run to the dish. This year Al installed ½-inch hard line from the VHF room's far side to the dish, connecting it to the feed horn via short flexible coax.

A front-mounted relay handles switching : It routes the feedline between transmit and receive ports on the feed horn while also isolating the preamp from the antenna during transmit, also bypassing it to a dummy load to avoid RF damage.

The amplifier is rated for 200 watts and seems to put out that much power even with the extended transmit times in Q65 mode. Accounting for feedline losses, we estimate ~165 watts reaches the dish. With the dish's ~30 dB gain, effective radiated power (ERP) is roughly 9–10 kW. However, the moon spans only 0.5 degrees, and our 4-degree beamwidth directs just 1.6% of that power onto it so only about 175 watts actually reach the moon's surface.

More pictures at : <https://gloucestercountync.weebly.com/earth-moon-earth-contesting.html>

October EME Contest - Continued on page 25

Software

We used WSJT-X with the Q65 mode, a digital scheme designed for weak-signal work like EME. Q65 employs 65-tone frequency-shift-keying (FSK) plus a sync tone for precise timing and frequency alignment, ideal for handling rapid signal fading from libration and Faraday rotation that are present in EME operations.

Key features include :

- Selectable T/R periods : 15, 30, 60, 120, or 300 seconds.
- Sub-modes (A–E) with tone spacings from ~2.7 Hz (sub-mode A) to ~10.8 Hz (sub-mode E); sub-mode C (~5.4 Hz) suits 60-second cycles.
- For 1296 MHz EME, Q65-60C is standard, decoding down to -27.6 dB SNR (-30.2 dB with a priori decoding using known callsigns).

This sensitivity allows modest stations like ours to complete QSOs over the 500,000-mile path. We mostly used 30C (30-second transmits) but switched to 60C when needed to match calling stations. These longer sequences make QSOs time-intensive but are essential for many EME setups.

QSO Spotting on HB9Q

Internet spotting via the HB9Q website is vital for EME success. Operators transmit on a set frequency (e.g., 1296.085 MHz) in a specified Q65 mode (B or C) and period (30 or 60 seconds), then post their details on HB9Q. Listeners tune to that frequency/mode and respond if they decode the CQ.

Without this coordination, QSOs are virtually impossible - signals often lie below the noise floor and aren't visible on waterfalls, with modes indistinguishable without prior knowledge. Pre-WSJT, EME relied on CW/SSB, demanding much stronger signals.

The Contest

The contest began at 8:00 PM EDT on Friday, but moonrise at the Clubhouse wasn't until ~8:40 PM. We started setup around 7:00 PM and finished in about 30 minutes after some troubleshooting : the dish was initially mounted on the rotator backward and elevation failed due to a quirky config error in the rotator controller that was fixed by Frank's quick correction.

At moonrise, the dish still aimed partially at the Clubhouse's east end, so we waited for it to move southward and rise. At that point we also had to monitor the beam path to avoid exposing anyone to the ~10 kW ERP during transmits since it was aiming at the front steps of the Clubhouse. Later outdoor movement was more possible as the moon rose and moved southward but we still needed to coordinate to avoid activity when transmitting.

We began with compass-based pointing but switched to visual aiming once the moon was overhead (visible through the mesh). The Wintrack controller provided precise tracking, ending manual tweaks.

By ~10:30 PM, with the dish still low and partially blocked northward, we decoded signals and answered a CQ from OK1DFC who was using 8- and 10-meter dishes, completing our first QSO in this setup. As the moon rose, more stations appeared on the waterfall and HB9Q requests rolled in. We logged 5 QSOs total before packing up at ~12:30 AM.

Saturday Attempts

Saturday's focus was demonstrating the station to daytime Club members unavailable for nights. We anticipated challenges : daytime sky noise adds 2-3 dB limiting success. Still, it might let visitors see the gear in action.

Rain was forecast for evening, so we planned teardown post-moonset. But light rain arrived early (~9:00 AM). We repositioned the dish and listened but heard nothing - not even HB9Q-reported signals - so we shut down and stowed gear by ~1:00 PM. The contest ran through Sunday, but rain precluded further ops (dish/electronics aren't weatherproof). Luckily, everything packs compactly and now waits in the VHF room corner until better storage is arranged.

Conclusions and Next Steps

The operation succeeded overall - no major equipment or procedural flaws emerged, though a few team members noted areas for procedural research. Extending into early morning could have added QSOs; we'll aim for that next time.

The next EME contest is November 11-12. Mark your calendars for potential participation - we hope for clear weather and strong conditions!



Figure 1 : Setting Up The Dish

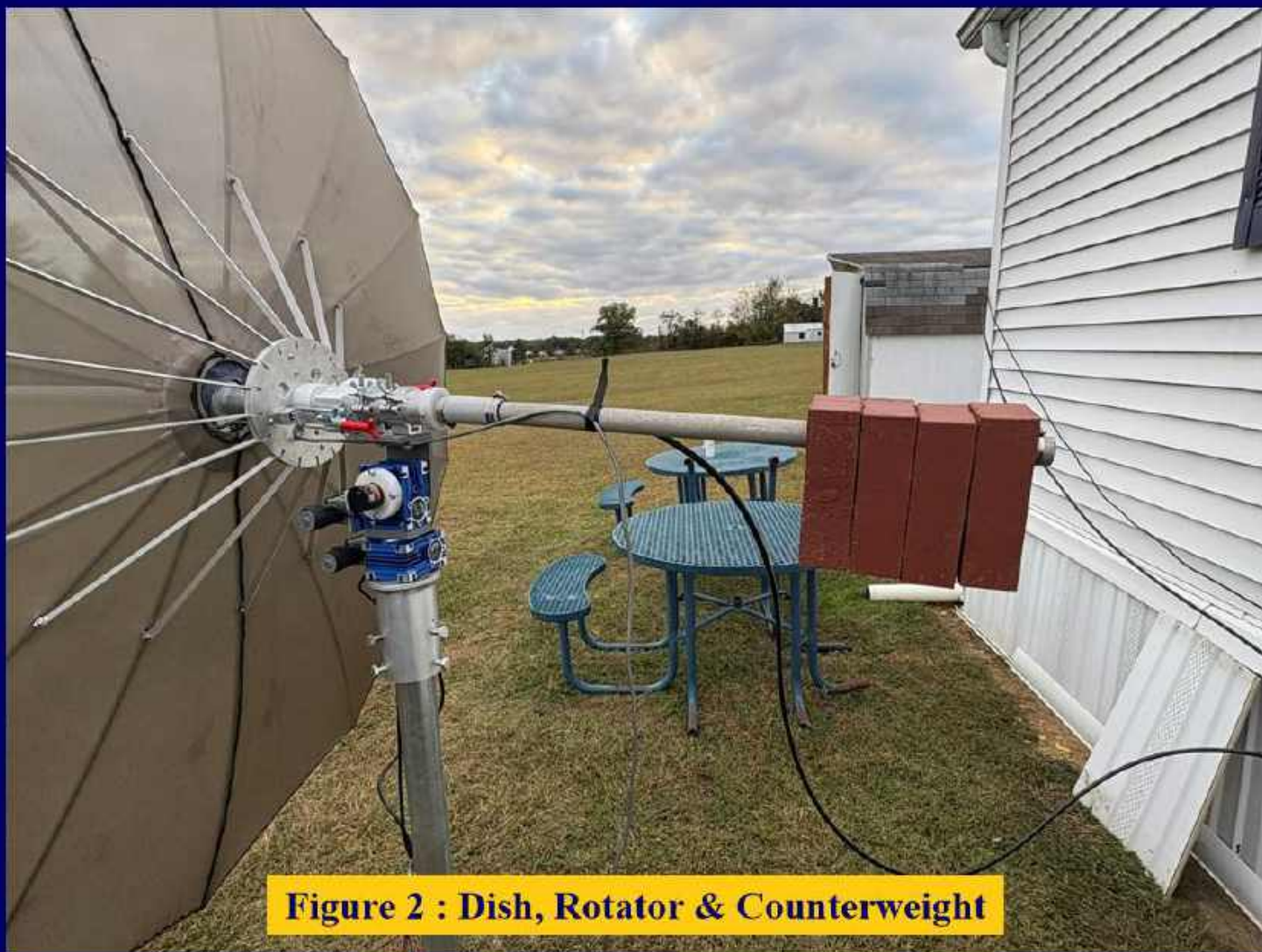


Figure 2 : Dish, Rotator & Counterweight



Figure 4 : The First QSO

2024-2028 Element 4 Amateur Extra Class License Question Quiz

This month we continue with Subelement E4 Amateur Practices (5 exam questions - 5 groups).
(Answers on Last Page)

E4C01

What is an effect of excessive phase noise in an SDR receiver's master clock oscillator?

- A. It limits the receiver's ability to receive strong signals
- B. It can affect the receiver's frequency calibration
- C. It decreases the receiver's third-order intercept point
- D. It can combine with strong signals on nearby frequencies to generate interference

E4C02

Which of the following receiver circuits can be effective in eliminating interference from strong out-of-band signals?

- A. A front-end filter or preselector
- B. A narrow IF filter
- C. A notch filter
- D. A properly adjusted product detector

E4C03

What is the term for the suppression in an FM receiver of one signal by another stronger signal on the same frequency?

- A. Desensitization
- B. Cross-modulation interference
- C. Capture effect
- D. Frequency discrimination

E4C04

What is the noise figure of a receiver?

- A. The ratio of atmospheric noise to phase noise
- B. The ratio of the noise bandwidth in hertz to the theoretical bandwidth of a resistive network
- C. The ratio in dB of the noise generated in the receiver to atmospheric noise
- D. The ratio in dB of the noise generated by the receiver to the theoretical minimum noise

E4C05

What does a receiver noise floor of -174 dBm represent?

- A. The receiver noise is 6 dB above the theoretical minimum
- B. The theoretical noise in a 1 Hz bandwidth at the input of a perfect receiver at room temperature
- C. The noise figure of a 1 Hz bandwidth receiver
- D. The receiver noise is 3 dB above theoretical minimum

E4C06

How much does increasing a receiver's bandwidth from 50 Hz to 1,000 Hz increase the receiver's noise floor?

- A. 3 dB
- B. 5 dB
- C. 10 dB
- D. 13 dB

Element 4 Amateur Extra Class Quiz - Continued on page 29

E4C07

What does the MDS of a receiver represent?

- A. The meter display sensitivity
- B. The minimum discernible signal
- C. The modulation distortion specification
- D. The maximum detectable spectrum

E4C08

An SDR receiver is overloaded when input signals exceed what level?

- A. One-half of the maximum sample rate
- B. One-half of the maximum sampling buffer size
- C. The maximum count value of the analog-to-digital converter
- D. The reference voltage of the analog-to-digital converter

E4C09

Which of the following choices is a good reason for selecting a high IF for a superheterodyne HF or VHF communications receiver?

- A. Fewer components in the receiver
- B. Reduced drift
- C. Easier for front-end circuitry to eliminate image responses
- D. Improved receiver noise figure

E4C10

What is an advantage of having a variety of receiver bandwidths from which to select?

- A. The noise figure of the RF amplifier can be adjusted to match the modulation type, thus increasing receiver sensitivity
- B. Receiver power consumption can be reduced when wider bandwidth is not required
- C. Receive bandwidth can be set to match the modulation bandwidth, maximizing signal-to-noise ratio and minimizing interference
- D. Multiple frequencies can be received simultaneously if desired

E4C11

Why does input attenuation reduce receiver overload on the lower frequency HF bands with little or no impact on signal-to-noise ratio?

- A. The attenuator has a low-pass filter to increase the strength of lower frequency signals
- B. The attenuator has a noise filter to suppress interference
- C. Signals are attenuated separately from the noise
- D. Atmospheric noise is generally greater than internally generated noise even after attenuation

E4C12

How does a narrow-band roofing filter affect receiver performance?

- A. It improves sensitivity by reducing front-end noise
- B. It improves intelligibility by using low Q circuitry to reduce ringing
- C. It improves blocking dynamic range by attenuating strong signals near the receive frequency
- D. All these choices are correct

E4C13

What is reciprocal mixing?

- A. Two out-of-band signals mixing to generate an in-band spurious signal
- B. In-phase signals cancelling in a mixer resulting in loss of receiver sensitivity
- C. Two digital signals combining from alternate time slots
- D. Local oscillator phase noise mixing with adjacent strong signals to create interference to desired signals

E4C14

What is the purpose of the receiver IF Shift control?

- A. To permit listening on a different frequency from the transmitting frequency
- B. To change frequency rapidly
- C. To reduce interference from stations transmitting on adjacent frequencies
- D. To tune in stations slightly off frequency without changing the transmit frequency





Ron Fish KX1W
ARRL Southern New Jersey Section Manager



YOU CAN HELP US CHANGE THE LEGAL RIGHTS OF AMERICAN HAMS

The ARRL is focused on reducing legal restraints on the ability of American Amateur Radio Operators to engage in the active practice and enjoyment of Amateur Radio.

One of the most insidious and increasing threats to the survival of Amateur Radio and our ability to serve our communities and Nation, as we are required to do by Federal regulation, is the proliferation of private land use restrictions that prohibit the installation of outdoor antennas and that sometimes actually deny Federally licensed Amateurs from operating any amateur radios, regardless of where their antennas are located - in their attics, hidden in trees, or mounted on their vehicles.

Federal law - since 1996 - has guaranteed to every American - except Amateur Radio Operators - the right to erect antennas outside or on their residences for the purpose of TV reception, satellite TV and internet access, wireless internet access, and even wireless internet redistribution. But Amateur Radio operators are denied the equal right to erect comparable antennas.

Since 2005, Federal law has also guaranteed to every American the right to proudly display the American Flag by installing flag poles in their yards. But, despite that right to install vertical poles in their yards - American Radio Amateurs are denied the right to use those vertical flag poles as vertical antennas.

We believe the denial - to licensed Amateur Radio Operators - of the rights guaranteed to all non-Amateur Radio licensed American homeowners - the right to install antennas on the land they own - is without justification and should not be permitted to continue.

To eliminate these private land use restrictions, the ARRL has worked over the past several years with our elected officials to draft Congressional legislation - H.R. 1094 in the U.S. House of Representatives and S. 459 in the U.S. Senate - that, when passed will extend to all Hams the right to operate from their homes and the right to install antennas on the land they own. We have bipartisan support for this legislation.

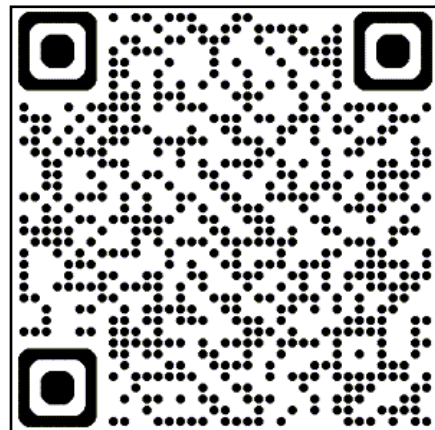
BUT, WE NEED YOUR HELP TO PASS THIS LEGISLATION!!!

How can you help? By sending a letter to your Representative and Senators asking that they co-sponsor and support H.R. 1094 and S. 459.

How can you send these letters? It is easy.

Go to : <https://send-a-letter.org/hoa> , or use the QR Code and help us by sending your letters to your Representative and Senators.

You do not have to be an ARRL member to send your letters.



ARES Resources (Updated as of November 2024)

ARRL ARES Registration Form : <https://bit.ly/3Ae2pCf>

Download the ARES Manual [PDF] : <https://bit.ly/3iUhJLQ>

ARES Field Resources Manual [PDF] : <https://bit.ly/3QT4PtY>

ARES Standardized Training Plan Task Book July 2024 Ver. 3.0 [Fillable PDF] : <https://bit.ly/4dToEes>

ARES Standardized Training Plan Task Book July 2024 [Word] : <https://bit.ly/4heLXSU>

ARRL ARES Plan July 2024 : <https://bit.ly/3Uf8gyf>

ARES Group Registration : <http://bit.ly/3XodGpX>

ARRL Emergency Communications Training : <http://bit.ly/3J2gMMf>

FEMA 2023 National Preparedness Report : <https://bit.ly/3YrPWnY>

Southern New Jersey Section Emergency Operations Plan 2023.PDF : <https://bit.ly/3YqMdHb>

ARRL ARES Monthly Newsletters : <https://bit.ly/408OV5d>

The Amateur Radio Emergency Service® (ARES) consists of licensed amateurs who have voluntarily registered their qualifications and equipment, with their local ARES leadership, for communications duty in the public service when disaster strikes. Every licensed amateur, regardless of membership in ARRL or any other local or national organization is eligible to apply for membership in ARES. Training may be required or desired to participate fully in ARES. Please inquire at the local level for specific information. Because ARES is an amateur radio program, only licensed radio amateurs are eligible for membership. The possession of emergency-powered equipment is desirable but is not a requirement for membership.

If you are interested in learning more about the Gloucester County ARES Program or becoming an ARES member, please contact Bob Keogh (KD2NEC@QSL.NET)

Gloucester County Amateur Radio Club Elmers

We are always looking for some Club Elmers. If you would to add your name to the Elmer's List, send your specialty to w2mmdgcarc@gmail.com. Here is what we have so far :

- Tony Starr K3TS : Antenna Construction; Contesting; CW Help and Training
- Ken Bozarth KN2U : Antennas
- Karl Frank W2KBF : Digital Messaging (FLDIGI, WinLink)
- Lenny Rust W2LJR : DMR Radios & Programming; VOIP; POTA; 3-D Printing
- Ron Block NR2B : Lightning Protection & Grounding
- Chris Prioli AD2CS : Kit Building; Antenna Building; Radio Programming; PC and Electronic Troubleshooting; Ham Radio Licensing & Studying; Local & Remote W2MMD HF Station Operation; Training & Support
- John Zaruba Jr K2ZA : Yaesu System Fusion Radio Programming; POTA; SOTA; CW Learning & Operating; 3-D Printing
- Jerry Barnish K2EAB : Radio Astronomy
- Mike Thompson KG4JYA : Radio Astronomy; VARA (HF and FM); WinLink
- Steve Farney W2SEF : WSJT-X; FT-8; LoTW; TQSL; Grid Square
- Gary Mirkin WA3SVW : FLDIGI; MMSSTV
- Jon Pearce WB2MNF : Satellite Communications; DMR; GD77; WPSD
- Frank Romeo N3PUU : Construction; Plumbing; Electrical; Fabrication; Jack-Of-All Trades
- Rich Subers W2RHS : 3-D Printing
- Dave Sheppard W2PAX : National Traffic System
- Bob Pantazes W2ARP : How To Properly Manage QSL Cards

From the Help Desk - November 2025

By Chris Prioli AD2CS - chris@ad2cs.com - www.ad2cs.com

Note : This is the third of an ongoing series of related articles that will each take a look at some facet of radio selection, installation, or operation as suggested by actual questions received from Club members or other amateur operators.

Q: Can the impedance of a section of unknown coaxial cable be determined using a NanoVNA? If so, how is it done?

A: The short answer is “**YES**” - coax line impedance can be determined using a NanoVNA. For the second part of the question, some preparatory information becomes necessary. The information provided herein is specific to the NanoVNA H4 with firmware version 1.2.40, but it should be very similar for other NanoVNA models and firmware versions.

This process will take advantage of the fact that the impedance in a feedline inverts every quarter-wavelength ($\lambda/4$) along its length, called the **$\lambda/4$ inversion property**. In a feedline, the impedance looking into the end of the feedline divided by the line impedance is equal to the line impedance divided by the load impedance. There is a simple equation that describes this relationship, as follows :

$$\frac{Z_{IN}}{Z_0} = \frac{Z_0}{Z_{LOAD}}$$

which can be rearranged or simplified as : $Z_0^2 = Z_{IN} \times Z_{LOAD}$

and then simplified again as :

$$Z_0 = \sqrt{Z_{IN} \times Z_{LOAD}}$$

These equations show how the line impedance is mathematically derived. The NanoVNA will provide us with the Z_{IN} value for use in the equation. However, we must also do a little bit more very simple math before we are ready to go.

The math that we need to work now deals with the **STOP** frequency of the RF sweep that we will use to measure the cable. The intent is to determine a sweep **STOP** frequency that is greater than the $\lambda/4$ frequency of the cable under test. This can be determined easily by dividing estimated length of the cable under test into one-quarter of the speed of light. When done as explained below, this calculation will produce the **free space $\lambda/4$ frequency in megahertz**, which will always be somewhat greater than the actual cable $\lambda/4$ frequency. If estimating the cable length in feet, divide that length into 246, but if estimating the cable length in meters, divide that length into 75. You should by now understand the significance of these numbers. Once you have an estimated **STOP** frequency, use the procedure below to determine the cable impedance.

Procedure

1. Go to **MENU > DISPLAY > TRACE** and turn off all traces except **TRACE 0**.
2. Go to **MENU > DISPLAY > FORMAT S11 (REFL) >** and select **SMITH**, and then be sure that the **SMITH** form is set to **R + jX**.
3. Go to **MENU > DISPLAY > MARKER** and make sure that only **MARKER 1** is selected and active.
4. Go to **MENU > STIMULUS > START** and set the **START** frequency to 50kHz.

From The Help Desk - Continued on page 34



5. Go to **MENU > STIMULUS > STOP** and set the **STOP** frequency to the value determined using the simple equation discussed above.
6. Connect any adapters needed to connect the cable to be tested to the NanoVNA.
7. Perform a calibration of the NanoVNA at the connection plane established in the previous step.
8. Save the calibration to a suitable memory slot in the NanoVNA.
9. Attach a 50Ω load (terminator) to the cable to be tested.
10. Connect the cable to be tested to the NanoVNA at the connection plane established in **Step 6** above.
11. Use the jog wheel to move **MARKER 1** along the displayed trace just until the first time that it crosses the prime axis.
12. Read the real (resistive) portion of the displayed complex impedance at the upper left corner of the display screen.
13. Use that resistance value in the impedance equation explained earlier, multiplying the resistance value by the load value of 50Ω , and then determine the square root of that product. This result will be the approximate line impedance of the cable under test.

Example

The complex impedance value displayed on the NanoVNA at the prime axis crossing point is $52.23-j29.5m\Omega$. If the real resistance value of 52.23Ω is then multiplied by the load impedance of 50Ω , we get a product of 2611.5. If we then determine the square root of that product, we find a line impedance value of 51.10Ω , which we can then assume indicates a 50-ohm cable.

I hope that this article will help to make your NanoVNA more useful to you as well as helping to improve your NanoVNA operational skills. The NanoVNA is an incredibly useful and powerful tool for the radio amateur to have in his/her tool arsenal. Knowing how to use it makes it just that much more valuable.



Volunteer Monitor Program Report : August 2025

The Volunteer Monitor (VM) Program is a joint initiative between ARRL and the FCC to enhance compliance in the Amateur Radio Service. This is the August 2025 activity report of the VM Program.

- Technician operators in Indiana, Colorado, and Arizona were issued advisories concerning 20-meter FT8 operation, a band on which Technicians have no privileges.
- Technician operators in Kansas and California received advisories concerning 40-meter FT8 operation; on 40 meters, Technicians have only CW privileges.
- A commendation was issued to an operator in Maine for exceptional courtesy during a net on a 2-meter repeater, in which he explained to new licensees the misconceptions regarding antenna tuners and resonant and non-resonant antennas.
- An operator in Georgia was issued an advisory concerning transmitting music on 75 meters, which is prohibited by Section 97.113(a)(4) of FCC rules.
- There was one virtual club presentation about the VM Program given to the Mt. Diablo Radio Club in California.
- There was one FCC meeting and one FCC case referral.

The totals for July 2025 monitoring were 1,067 hours on HF frequencies, and 1,883 hours on VHF frequencies and above, for a total of 2,950 hours.

Thanks to Volunteer Monitor Program Administrator Riley Hollingsworth, K4ZDH

Support The Gloucester County Amateur Radio Foundation With Your QCD Contribution

By Jon Pearce WB2MNF

Introduction

This appeal is directed to our valued Club members and supporters who are age 73 or older and as such are required by the IRS to make Required Minimum Distributions (RMDs) from their Individual Retirement Accounts (IRAs). The Gloucester County Amateur Radio Foundation, a 501(c)(3) nonprofit charitable organization affiliated with the Gloucester County Amateur Radio Club, invites you to consider making a Qualified Charitable Distribution (QCD) to support our mission. Your contribution can fund educational programs, specialized Clubhouse hardware, and the activities of the Woodruff School STEM Club, while potentially offering you significant tax benefits.

What is a Qualified Charitable Distribution (QCD)?

A Qualified Charitable Distribution (QCD) is a direct transfer of funds from your IRA to a qualified 501(c)(3) charitable organization, such as the Gloucester County Amateur Radio Foundation. For individuals aged 73 or older, QCDs can satisfy all or part of your annual RMD requirement without increasing your taxable income. The IRS allows up to \$100,000 per year (or \$200,000 for married couples filing jointly) to be distributed as a QCD, provided the funds are transferred directly from your IRA custodian to the charity.

Tax Benefits of a QCD

Making a QCD offers several potential tax advantages :

- **Reduces Taxable Income** : Unlike regular IRA withdrawals, QCDs are not counted as taxable income. This can lower your adjusted gross income (AGI), potentially reducing taxes on Social Security benefits or Medicare premiums.
- **Satisfies RMD Requirements** : A QCD counts toward your RMD, helping you meet IRS requirements without increasing your tax liability.
- **Supports Charitable Giving** : By directing your RMD to the Foundation, you support our mission to advance amateur radio education and STEM initiatives in our community, without impacting your personal cash flow.

How Your Donation Helps

Your QCD contribution to the Gloucester County Amateur Radio Foundation directly supports :

- **Clubhouse Education Programs** : Providing workshops, training, and licensing courses to foster amateur radio skills and knowledge.
- **Specialized Clubhouse Hardware** : Upgrading and maintaining equipment to ensure our facilities remain cutting-edge for members and visitors.
- **Woodruff School STEM Club** : Funding hands-on STEM activities for students, inspiring the next generation of innovators in science, technology, engineering, and mathematics.

How to Make a QCD

1. **Confirm Eligibility** : You must be 73 or older at the time of the distribution.
2. **Contact Your IRA Custodian** : Instruct them to make a direct transfer to the Gloucester County Amateur Radio Foundation. Ensure the payment is made payable to the Foundation, not to the Club.

Support GCARF With QCD Contribution - Continued on page 36

3. **Provide Our Details :** Use our official name, "Gloucester County Amateur Radio Foundation," and contact us for our tax ID and mailing address.
4. **Verify the Transfer :** Ensure the distribution is completed by December 31st to count toward your current year's RMD. Note that QCDs must be made in advance of your other RMDs.
5. **Consult Your Tax Advisor :** While QCDs offer tax benefits, a professional can confirm how they fit into your financial plan.

Make a Difference Today

Your QCD contribution not only fulfills your RMD obligations but also empowers our community through education and innovation in amateur radio and STEM. By supporting the Gloucester County Amateur Radio Foundation, you're investing in the future of our hobby and inspiring young minds at the Woodruff School STEM Club.

Please contact **John O'Connell K2QA** at treasurer@w2mmd.org for more information on how to make your QCD donation. Together, we can continue to make a meaningful impact in Gloucester County and beyond.

Thank you for your generosity and commitment to our shared mission.

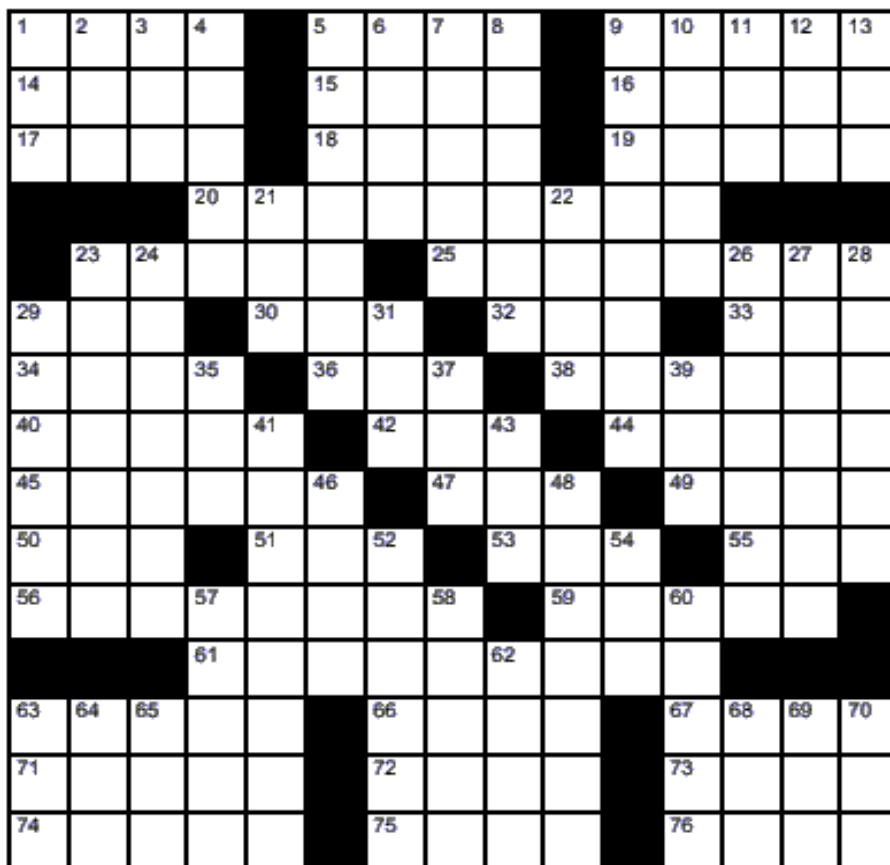


Fine Businesses

Answers on Page 50

Across

1. CA company, started in AZ*
5. Sens., IMD, selectivity, e.g.
9. With 20, 61 and 76 across, the theme of this puzzle, and the * clues
14. PJ6 place
15. Inductor
16. Put out
17. Tester type
18. Magazine contents
19. G-land elevators
20. See 9 across
23. Animate
25. Porcelain, etc.
29. Kind of code
30. TN company, with 53 across*
32. Windows predecessor
33. Immediately
34. GM Gaelic
36. Hi-___
38. Crunch maker
40. 5N currency
42. Tower ring
44. Lifted, so to speak
45. Coastal features
47. Browning, ham, or Grissom, not
49. ___ of measure
50. However, on CW
51. Part of NIB, on eBay, say
53. See 30 across
55. Lt.'s inferior, in the Navy
56. Passings on
59. NORs' cousins
61. See 9 across
63. Transplant, in a way
66. Operates, as in a multi-multi
67. Wise men
71. Kind of pad

Crossword Puzzle courtesy of <https://www.w2pa.com/Home/articles/crossword-puzzles>

72. Xmtid, opp.

73. Hammer part

74. ___ pole

75. GM island

76. See 9 across

Down

1. Bal. mod. prod.

2. QTC test

3. Pertaining to, on CW

4. Civil rights org.

5. Quickly run

6. Partner of circumstance

7. CA company*

8. Replicated

9. FCC does it, to a 2-year vacant call sign

10. OT discrimination?

11. ABC followers

12. Professional suffix

13. Older OM's, or YL's for that matter

21. Connector label, often

22. Soldering implement

23. Toothy fish

24. Permittivity symbol

26. Performed a canticle, e.g.

27. IA company*

28. Candies

29. IL company*

31. On-air group

35. "___ he drove out of sight..."

37. "599 HR - FB ___ OM"

39. QR followers

41. Where most verticals are fed

43. ENN, for example, with "numbers"

46. Horizontal location, during a contest off-time, perhaps

48. What a ham does before identifying

52. Hi-Z low-Z interfaces, say

54. Subway alternative

57. Prefix for a Seoul man, or YL for that matter

58. Four over four, for example

60. Mythological SV YL

62. Little pistol view of a big gun?

63. Rprt.

64. CO company*

65. 70's rock?

68. CA company, originally in WA*

69. SK company*

70. Keyboard key

Gloucester County Amateur Radio Club

General Membership Meeting Minutes

Wednesday, October 01, 2025



Meeting opened @ 1900 Hours by President Jon Pearce WB2MNF with the Pledge of Allegiance to the Flag

Attendance :

- In-person : 37
- Via Zoom : 22

Visitors :

- **Spencer Webb W2SW : ZOOM**

New Members :

- **Robert Erenburg KD3BGJ, Wilmington, DE**
- **Paul Kaplan N2FOB, Sicklerville, NJ**
- **Martin Moon KD3BWV, Media, PA**
- **Brandon Taylor KE2GLJ, Haddon Heights, NJ**

Upcoming Clubhouse Events :

- Tech Saturday 10/4
- CPR Class 10/5
- License testing 10/9
- BoD Meeting 10/15
- Dinner at the Clubhouse 10/22

Member current activities :

- **Jim Wright N2GXJ** discussed the latest fox hunt results.
- **Karl Frank W2KBF** showed his stealth Meshtastic node built into a birdhouse.

Business Meeting :

Minutes of September 2025 business meeting as published in CrossTalk were approved by voice vote of members present.

TREASURER'S REPORT :

- 2025 Year to Date Income and Expense
 - ◆ Income : \$16,693.63
 - ◆ Expense : \$11,770.10
 - ◆ Net : \$4,923.53

Remarks :

GLOUCESTER COUNTY AMATEUR RADIO FOUNDATION :

- Report : **John O'Connell K2QA** discussed account balances of the Foundation.

October 2025 General Membership Meeting Minutes - Continued on page 39

CLUBHOUSE REPORT :

Report :

- **Al Arrison KB2AYU** discussed outdoor projects that need to get finished before Winter arrives.
- **Jon Pearce WB2MNF** reviewed access protocols for the HF remote station.

HAMFEST :

- Report : **Ron Block NR2B** provided a summary of the Hamfest.

DX AND CONTESTS :

Report :

- **Tony Starr K3TS** reported via Zoom on October contests and notable DX, details in Crosstalk.
- **Jon Pearce WB2MNF** discussed the upcoming Earth-Moon-Earth Contest.

EDUCATION COMMITTEE :

Report : **Jon Pearce WB2MNF** and **Angela Metzger KE2DRJ** reported on STEM Class activities and a balloon launch from the Woodruff School.

TECHNICAL COMMITTEE :

Report : **Frank Romeo N3PUU** reported the Glassboro DMR repeater is now operations and integrated with the AmComm Network.

OLD BUSINESS :

- Previous GM meeting minutes approved by voice vote of members present.
- Treasurers report approved by voice vote of members present.

NEW BUSINESS :

Motion to appropriate \$3000 to complete the Clubhouse grounding project seconded and approved by voice vote of members present.

2026 slate of Club Officer candidates presented to the membership :

- **President : Jonathan Pearce WB2MNF**
- **Vice President : Ron Block NR2B**
- **Treasurer : John O'Connell K2QA**
- **Recording Secretary : John Zaruba Jr K2ZA**
- **Corresponding Secretary : Michael Resnick N2WOQ**
- **Director : Chris Prioli AD2CS**
- **Director : James Wright N2GXJ**
- **Trustee : (Vote for one)**
 - **Charles Lanard KD2EIB**
 - **Greg Ciraula K3GC (Candidate nominated from the floor)**

PRESENTATION : "The Lowly Coaxial Cable" by **Spencer Webb W2SW**

Meeting adjourned @ 1957 Hours

Respectfully submitted,
John Zaruba K2ZA, Recording Secretary

The Kelvin Four-Wire Resistance Measurement Method

By Chris Prioli AD2CS - chris@ad2cs.com - www.ad2cs.com

Resistance measurement is one of those things that we often tend to take for granted, and don't think much about. However, it is exactly that mindset that can cause errors to creep into our work without our ever noticing that the errors are present at all. This can happen quite easily, and we might not ever be aware that it is happening, because we have come to expect and accept the erroneous readings as valid and factual. What is this guy talking about, you ask? Read on...

Consider the conventional measurement of a 0.2Ω resistance with an ohmmeter whose leads each have a resistance of 0.1Ω . This means that the test leads have as much resistance as the actual device under test, meaning that the meter will indicate a reading of 0.4Ω , or a 100% error. This is unacceptable and is to be avoided if possible.

Now consider a $0.773\mu\text{H}$ toroidal coil wound on a T50-6 core using 0.6mm diameter enameled copper wire. If measured with a conventional ohmmeter, this inductor would yield a resistance measurement of zero ohms, and in fact would cause a tonal continuity tester to emit the indicating tone. However, when measured using my Ascel $\text{\AE}20218$ Milliohm Meter, which uses the Kelvin resistance measuring method, we get a quite different picture. Now we see that this inductor actually has a measurable resistance of 0.0226 ohms.

OK - 0.0226 ohms does not seem like a whole lot of resistance, but it is **clearly** more than we originally measured with the less-capable meter system. So, what is it about the $\text{\AE}20218$ that makes it "**more capable**" than the standard ohmmeter as found in my Greenlee DM-510A DVOM? In short, the answer is the four-wire Kelvin measurement method, which is what we are going to explore in this article.

To begin, we have to accept some truths right up front. The first of these is that any test lead will have some inherent resistance within the lead, as a function of the physics of the test lead. The test lead is made of wire, and wire - any wire - has a given amount of resistance per foot (or inch) of that wire. The data in (**Table 1 : Copper Wire Resistance By AWG Size, Solid Wire**) provides some insight into these inherent resistances. As the caption reveals, these values are for solid copper wire. Similar tables are available for wires that are stranded with various stranding schemes. Because of the wide variety of different stranding schemes on the market, it was decided to ignore the stranded wires and illustrate the solid wire for this discussion.

As the **Table 1** data shows, 22AWG solid copper wire will have an approximate resistance of 16.5 ohms per thousand feet of wire. This works out to 0.0165 ohms per foot of that wire. That is how this table works. Bear with me here, because now I am going to do some magic with the table.

Take a look at the 23AWG wire. It is listed as having a 509 circular mils area, which works out to 22.56 mils diameter. Compare that to the 0.6mm diameter wire used to wind the toroidal coil referenced earlier in this article. A diameter of 0.6mm is equivalent to a diameter of 23.62 mils - very close to our 22.56 mils of the 23 AWG wire. Now let's look at the resistance of the 23AWG wire, which is listed as 20.8 ohms per one thousand feet of length, equivalent to 0.0208 ohms per foot. Now look at the measured resistance of the toroidal coil referenced earlier. That resistance was 0.0226 ohms. This is remarkably close to the resistance of one foot of 23 AWG solid copper wire, which is remarkably close to the diameter of the 0.6mm diameter magnet wire used for the coil in the first place.

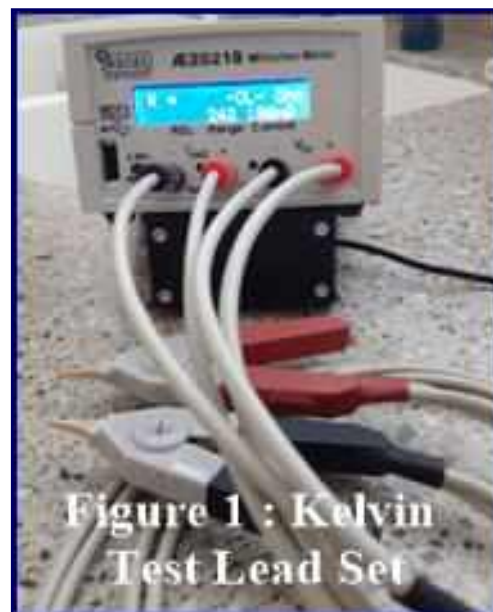


Figure 1 : Kelvin Test Lead Set

Kelvin Resistance Measurement Method - Continued on page 41

Why did I just go through all of this? I did this to clearly illustrate that these “*zero ohms*” inductors do in fact have a measurable - and predictable - resistance based on the physics of the wire used to manufacture the inductor. Concept number one is now out of the way, and we can move on to concept number two.

I said earlier that any test lead will have “*some inherent resistance within the lead, as a function of the physics of the test lead*”, a statement that we have just validated with the above explanation and illustration. The next truth that we have to accept is that for all intents and purposes, the resistance of the leads of a quality voltmeter can largely be ignored when considering the effect on the accuracy of a voltmeter reading. Let’s look at why this is so.

A voltmeter is connected in parallel (**Figure 2**) with the circuit or device under test. A quality (**read : accurate**) voltmeter will have a very high input impedance as indicated by the meter’s ohms per volt rating. In the bad old days of analog voltmeters, an ohms per volt rating of 20,000 ohms per volt was considered to be a trait of a good meter. That was, and still is, the DC Volts input impedance rating of the venerable Simpson 260 analog VOM. The AC Volts scale, however, dropped to an input impedance of only 5,000 ohms per volt with the Simpson 260.

A more accurate analog VOM was typically found in the form of a vacuum-tube voltmeter (VTVM), which had input impedances on the order of ten or eleven megohms per volt, a considerable increase over the previous impedances discussed.

AWG Gauge	Area (Circular Mils)	Diameter (mils, 1000th in)	Electrical Resistance (Ohms per 1,000 feet)		Weight (lb/1,000 ft)
			at 77 °F (25 °C)	at 149 °F (65 °C)	
0000 (4/0)	212000	460	0.05	0.057	841
000 (3/0)	168000	410	0.063	0.073	506
00 (2/0)	133000	365	0.0795	0.092	403
0 (1/0)	106000	325	0.1	0.116	319
1	83700	289	0.126	0.146	253
2	66400	258	0.159	0.184	201
3	52600	229	0.201	0.232	159
4	41700	204	0.253	0.292	126
5	33100	182	0.319	0.365	100
6	26300	162	0.403	0.465	79.5
7	20800	145	0.508	0.581	63
8	16500	128	0.641	0.739	50
9	13100	112	0.808	0.928	39.6
10	10400	102	1.02	1.18	31.4
11	8230	92	1.28	1.47	24.9
12	6530	81	1.62	1.87	19.8
13	5180	72	2.04	2.34	15.7
14	4110	64	2.58	2.97	12.4
15	3260	56	3.25	3.73	9.86
16	2580	51	4.09	4.73	7.82
17	2050	45	5.16	5.93	6.2
18	1620	40	6.51	7.51	4.92
19	1290	36	8.21	9.43	3.9
20	1020	32	10.4	11.9	3.09
21	810	28	13.1	15.1	2.45
22	642	25.3	16.5	19	1.94
23	509	22.5	20.8	23.8	1.54
24	404	20.1	26.2	30.2	1.22
25	320	18	33	38.1	0.97
26	254	15.9	41.6	48	0.769
27	202	14	52.5	60.1	0.61
28	160	12.6	66.2	76.4	0.484
29	127	11	83.4	96.1	0.384
30	101	10	105	121	0.304
31	79.7	9	133	153	0.241
32	63.2	8	167	193	0.191
33	50.1	7	211	245	0.152
34	39.8	6.3	266	307	0.12
35	31.6	5.5	335	388	0.095
36	25	5	423	488	0.076
37	19.8	4.5	533	611	0.06
38	15.7	4	673	776	0.048
39	12.5	3.5	848	976	0.038
40	9.9	3.1	1070	1230	0.02

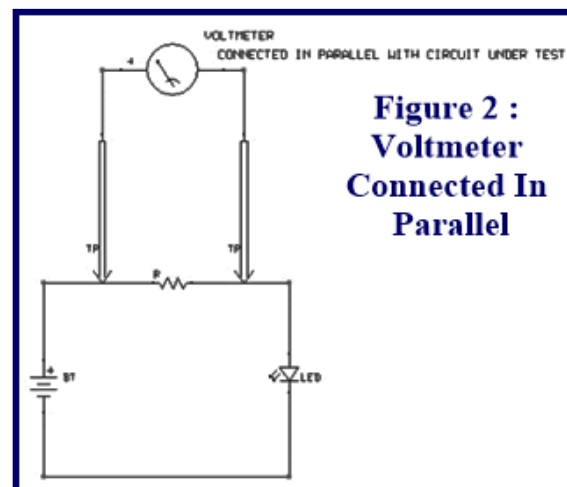


Figure 2 :
Voltmeter
Connected In
Parallel

Modern digital voltmeters also have ten- or eleven-megohm per volt input impedances, due to the fact that they typically employ a field-effect transistor-based amplifier circuit. The FETVOM was the portable, battery-operated successor to the VTVM, again using a FET circuit in place of the vacuum tube amplifier circuit.

The bottom line to all of this is that the connection of a quality voltmeter to an operating circuit should have an extremely limited effect on the working circuit, because we are adding such an immense resistance in parallel to the working circuit. The circuit loading will be nil and the voltmeter reading will be as accurate as possible.

Now for the third truth that must be accepted. In a series circuit, any current flowing in that circuit will pass as the same current value through all series-connected components of the circuit. This is a basic concept, but it is important that it is understood in order to understand the operation of the Kelvin resistance measurement method. It is equally important to understand that an ammeter is always connected in series (**Figure 3**) with the circuit whose current is being measured, and therefore becomes one of the series components in that circuit and the full series current will therefore flow through the ammeter.

Let's now move on to the physical aspect of Kelvin resistance measurement. We start out with the fact that this method requires making two separate measurements and then using the results of those measurements to calculate the resistance.

The Kelvin method uses a set of four test leads (**Figures 1 & 4**), each of which has some inherent resistance. At one end of each test lead is a connector that makes the circuit into the ohmmeter, *e.g.*, a banana plug or some similar connector. The meter, of course, has a mating receptacle for each of the four test leads. Two of the test leads are voltage leads, and two are current leads. At the working end of the test leads, each pair of leads is brought together to a specialized type of test clip similar to an alligator clip, but the similarity is in general appearance only.

A standard alligator clip is a single connection for a single lead, with both “jaws” of the clip connected to each other whether the clip is open or closed. The Kelvin test clips are quite different in that the two opposing “jaws” are insulated from each other. The clip body is of an insulating material. The two separate test leads are connected separately, one lead to each jaw of the Kelvin test clip. When the test clip is open, the two test leads are isolated from each other.

The typical Kelvin test lead set consists of two leads having red banana plugs on one end of each lead and two leads having black banana plugs on one end of each lead. The two leads with the red banana plugs come together to a Kelvin test clip having red insulation on the handles, and as stated earlier, are isolated from each other when the test clip is held open.

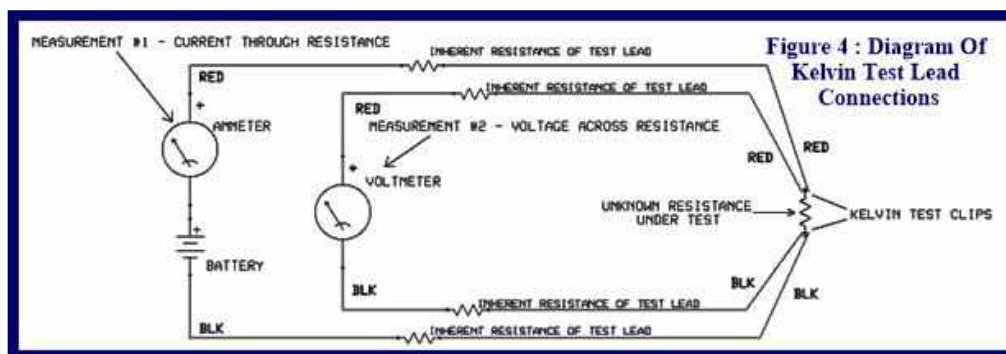
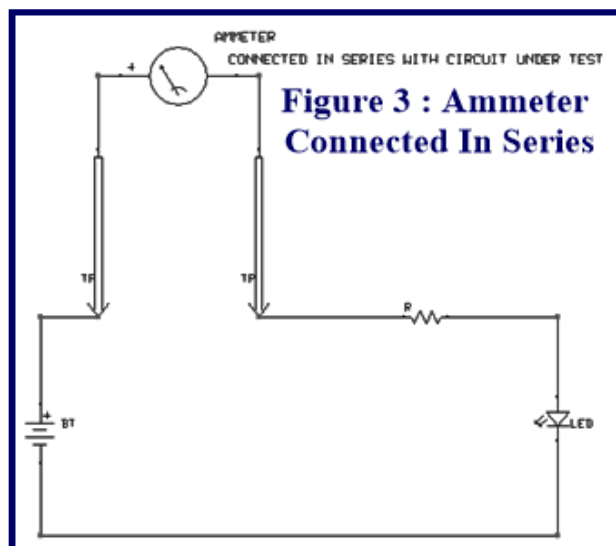


Figure 5 shows the Kelvin test clip with its halves separated, showing that one of the test leads is connected to each half of the test clip, and that when the test clip is open, the leads are isolated from each other. The two leads with the black banana plugs come together to a Kelvin test clip having black insulation on the handles in a manner that is the same as that for the red test leads, and as stated earlier, are isolated from each other when that test clip is held open.



Figure 5 : Kelvin Test Clip Disassembled

At the test instrument, the banana jacks are labeled **Current OUT** and **Voltage IN**. There is one red and one black banana jack each for current and voltage. So long as the colors are matched, it makes no difference which lead is connected to which banana jack as regards current versus voltage. **Figure 6** shows the front panel of the Ascel Electronic Æ20218 Milliohm Meter, a test instrument that uses the Kelvin resistance measurement method.



Figure 6 : The Ascel Electronic Æ20218

When the Kelvin resistance measurement method is in use, the test instrument sends a DC current out to the resistor under test, using one pair of the connected test leads. The test instrument then precisely measures the current that flows through the unknown resistance. At the same time, a precise measurement of the voltage drop across the unknown resistance is made by the test instrument, using the second set of connected test leads. These two measured values are used to calculate the resistance of the device under test using the Ohm's Law equation for resistance.

$$R = \frac{E}{I}$$

As an example, suppose that the test instrument measures a current of 783mA and a voltage drop of 3.85V.

In that case >>>

$$R = \frac{3.85}{0.783} = 4.917\Omega$$

A quick look at the diagram in **Figure 7** might help to make this whole concept a little bit more clearly understood. In the **Figure 7** example, a current of 335mA is measured through the unknown resistance, across which a voltage drop of 6.7 volts is measured. Apply these values into the Ohm's Law equation as shown in the diagram and we get a calculated resistance of 20 ohms for the device under test. Note that the two red leads are connected to the positive sides of the two meters, and the two black test leads are connected to the negative terminals of the two meters.

The inherent resistance of the test leads is nullified differently in the two measurements. In the current measurement, it is a moot point, because the current flowing through the resistance under test is the same as the series current throughout the entire circuit, including the test leads.

In the voltage measurement, as has already been explained, the extremely high input impedance of the voltmeter circuit causes minimal loading to the circuit under test, making the resistance of the test leads negligible.

Because of the fact that the lead resistance is taken out of the measurement, the remaining resistance is purely that of the device under test. Because that resistance is calculated

arithmetically using two other non-resistive measurements as the basis for the calculation, we have the strength of Ohm's Law to support the accuracy of the ultimate resistance determination. These two measurements, as we have seen, are largely unaffected by the inherent resistance of the test leads, reducing the error almost to the point of non-existence.

We cannot get much better than that. The Kelvin four-wire or four-terminal resistance measurement method gives us the most accurate resistance measurement we can obtain without spending thousands of dollars on high-level laboratory test equipment.

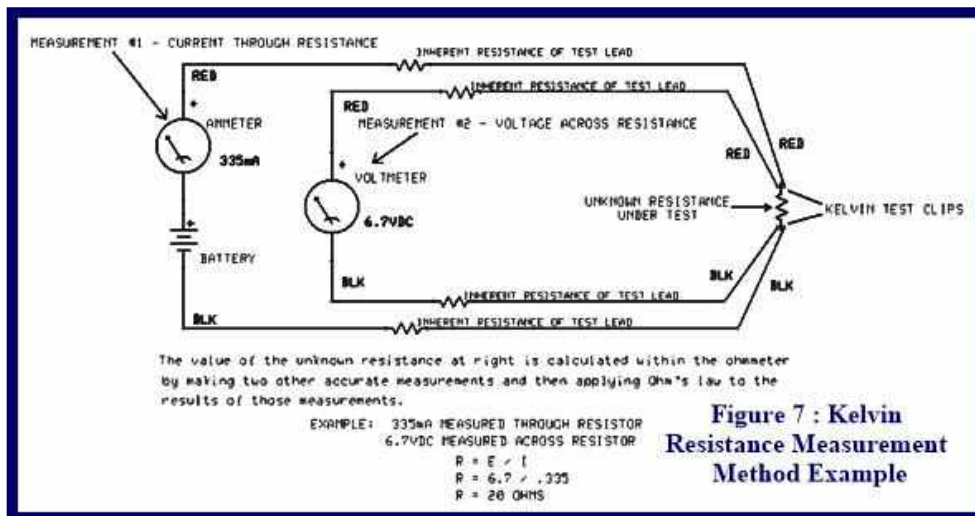


Figure 7 : Kelvin Resistance Measurement Method Example



Gloucester County Amateur Radio Club

Board of Directors Meeting Minutes

Wednesday, October 15, 2025



Meeting opened @ 1900 Hours by President Jonathan Pearce WB2MNF

Attendance :

- **President Jon Pearce WB2MNF : Present**
- **Vice President Ron Block NR2B : Present**
- **Treasurer John O'Connell K2QA : Present**
- **Recording Secretary John Zaruba Jr K2ZA : Present**
- **Corresponding Secretary Mike Resnick N2WOQ : Present**
- **Director (2023-2025) Chris Prioli AD2CS : Present**
- **Director (2023-2025) James Wright N2GXJ : Present**
- **Director (2024-2026) Al Arrison KB2AYU : Present**
- **Director (2024-2026) Bill Price NJ2S : Present**
- **Director (2025-2027) Jeffrey Garth WB2ZBN : Present**
- **Director (2025-2027) Frank Romeo N3PUU : Present**
- **Trustee (2022-2025) Charles Lanard KD2EIB :**
- **Trustee (2023-2026) Sheldon Parker K2MEN :**
- **Trustee (2024-2027) Len Rust W2LJR :**
- **Trustee (2025-2028) Earl Moore KC2NCH : Present**
- **Member Karl Frank W2KBF : Present**
- **Member Bob Keogh KD2NEC : Present**
- **Member Bruce Canino KD2LBU : Present**

New Member Applications :

- **Paul Jensen KC3LSU, General Class, Hudgins, VA**
- **Bill McCourt WF1L, Amateur Extra Class, Dover, DE**
- **Nicholas Reigel KE2DCD, Amateur Extra Class, Cherry Hill, NJ**

Treasurer's Report :

- **Income : \$16,977.39**
- **Expense : \$12,741.94**
- **Net : \$4,235.45**

Detailed financial statements are available for member review upon request.

Committees :

- **Clubhouse : Al Arrison KB2AYU** reported on the successful deployment of the EME dish for the recent contest. Conduit installation preparations for the towers are underway.
- **Holiday Party :** Discussion of restaurant menu choices.
- **Technical : Brandon Taylor KE2GLJ** made a Raspberry Pi / Direwolf / Node Red APRS station for the Clubhouse.
- **Programs : Jon Pearce WB2MNF** reported on upcoming Tech Saturday programs.

October 2025 Board of Directors Meeting Minutes - Continued on page 46

- **Education :**
 - ♦ **Jon Pearce WB2MNF** provided an update on STEM club activities.
 - ♦ **Chris Prioli AD2CS** requested input on the next build project.
- **Membership :** New member applications approved by voice vote of Club officers present.

Old Business :

- Motion to approve previous BoD meeting minutes passed by voice vote of Club officers present.
- Motion to approve Treasurer's report passed by voice vote of Club officers present.

New Business :

- **Karl Frank W2KBF** proposed using the Clubhouse for the upcoming Simulated Emergency Test. Tentative date is Sunday, October 26, 2025 - 9am to 1pm. Approved by voice vote of Club officers present.
- Discussion of candidates for the Volunteer Appreciation Award.
- Discussion of acquiring an Automated External Defibrillator for the Clubhouse.
- **Club Nets :**
 - ♦ 40 meter frequency : 7.170 MHz (+/- 5 or 10 kHz)
 - ♦ 2 meter nets : September 2025
 - ◇ Tuesday : Average 7.6 check ins
 - ◇ Thursday : Average 7.75 check ins

Meeting adjourned @ 2002 Hours

**Respectfully Submitted,
John Zaruba Jr K2ZA
Recording Secretary**



Gloucester County ARES Participates In The October 2025 Simulated Emergency Test (SET)

By Mike Resnick N2WOQ

At 12:00 hours, a hand-held radio announced the activation of the ARRL Southern New Jersey Section Simulated Emergency Test. The announcer made it clear that the message was a test : An earthquake had taken place in Burlington County. Lead by GC-ARES Assistant Emergency Coordinator **Karl Frank W2KBF**, **Angela Metzger KE2DRJ** assisted by **Craig Metzger KE2GNU**, handled calls and recorded the communications on an ICS 309 form.



Other participants were **Court Smith KD2SPJ**, **Bruce Canino KD2LBU**, **Chris Prioli AD2CS**, **Mike Pentimall KC3VTF**, and **Mike Resnick N2WOQ**. The W2MMD Clubhouse was used as the base of operations for this SET.

Throughout the three-hour test, communications came in noting the number of people needing shelter, the location and capacity of such shelters. Buses were routed to Rowan University during this exercise. As Rowan filled to capacity, Mercer, Ocean, and Cumberland County reported their status as buses arrived there. At 14:47 Hours, a call announced the conclusion of the section-wide drill with forms to be send in. Various modes were used during the exercise : HF, VHF, UHF, and Winlink.

Karl Frank W2KBF commented : On behalf of GC-ARES I would like to thank the GCARC BoD for permitting use of the W2MMD Clubhouse this afternoon. Eight Club members participated and we accomplished ALL of our goals. **Mike Resnick N2WOQ** was on hand to take photos. As expected our 75 meter signal was heard weakly by only a few stations and we made only one 2-way contact on 75 meters (in NNJ). We confirmed that, even with a large loop antenna, 75 meter NVIS operation presents a challenge during daylight hours.





Jersey String Band - Report for November/December 2025

By Glenn Dougherty N2YIO

Well we are now into the heart of what we call MUM Season for 2026. That means the band is in full speed getting ready for the 2026 New Years Day Parade. They are now practicing two days a week besides doing what ever parades that are left to bring in the money to make sure we have enough to finish out 2025 and make sure we can start 2026 on a good note.

November 15th is also the band's 7th anniversary as The Jersey String Band. We have had a few new members join the band this year so we are growing ever slowly and hopefully the new members will help us improve over our 12th place finish in the 2025 parade.

As of this report we have 3 more parades in October :

- 10/18 : The Williamstown Halloween Parade along Main Street. They also have a small combo job at Noon
- 10/19 : The Long Branch Columbus Day Parade postponed from last Sunday due to weather
- 10/25 : The Alloway Halloween Parade and they also have a small combo job
- 11/15 : Jersey String Bands 7th Anniversary Party
- 11/29 : Swedesboro Holiday Parade and then the Myerstown Parade
- 12/5 : Vineland Tree Lighting
- 12/6 : Salem/West Cape May Holiday Parades
- 12/7 : Newtown Christmas Parade

The rest of December the band will be putting the final touches on both the music and drill for the parade on New Year's Day 2026.

If there is anyone that has the time and would like to help the band out with the props, please stop out on any Wednesday Night at The Woodbury Heights Fire House on Elm Avenue in Woodbury Heights.

We will be marching 14th in 2026 so it would be a long day but maybe not as early as in past years where we would have to be in the city by 10AM. We might not have to be in Philadelphia until maybe 1PM. Also If you would like to learn how the String Band Division is judged, check out episode 14 of the String Band Sessions Podcast with host James Donio on YouTube where they break down how the points are given out for each category.

You can get more information on the Band at our **Facebook** (<https://www.facebook.com/JerseyStringBand>) **Page**. We also have a Podcast that should be starting back up soon at Jersey String Band Podcast and also check out the **Philadelphia Mummers Association Sessions Podcast** (<https://www.youtube.com/@pmsba>) that comes out every other Friday on YouTube.

"The big thing about being in a club and being a "Ham" is to help each other when there is a need "
- W2SEF

W2MMD



www.facebook.com/W2MMD

Facebook





Regional Skywarn Websites For On-Line And In-Person Training Classes

Philadelphia/Mt Holly Skywarn : www.weather.gov/phi/skywarn

State College, PA Skywarn : www.weather.gov/ctp/skywarn

Pittsburgh, PA Skywarn : www.weather.gov/pbz/skywarn

State College Skywarn Spotter Google Meet Training Class Basic/Winter Spotter Talk

Monday, November 3, 2025 @ 1800 Hours

Google Meet Website : <https://meet.google.com/xrj-vuka-mjc>

Registration not required

Weather Information Nets & Frequencies

Hurricane Watch Net : www.hwn.org

- Day Time : 14.325 MHz
- Night Time : 7.268 MHz
- Information : 14.300 MHz

Local SKYWARN Frequencies :

- Atlantic County : K2BR, 146.745 MHz (-) 146.2 Hz
 ◇ Net Every Monday @ 1900 Hours
- Camden County : K2EOC, 146.895 MHz (-) 91.5 Hz
 ◇ Net Every Thursday @ 2030 Hours
- Cumberland County : KE2CK, 146.805 MHz, (-) 118.8 Hz
 ◇ Net Every Monday @ 1930 Hours
- Gloucester County : W2MMD, 147.180 MHz (+) 131.8 Hz
 ◇ Net Every Sunday @ 1930 Hours
- Salem County : N2KEJ, 146.625 MHz (-) 131.8 Hz

What is a Skywarn Spotter?

By Jonathan Guseman KJ4ZWS, Warning Coordination Meteorologist
National Weather Service Central PA - <https://www.weather.gov/skywarn>

Spotters are our eyes/ears in the field! The NWS depends on our spotters to give us ground truth, therefore assisting in warning issuance and being heavily involved in reporting and documentation. As we issue warnings from inside of our offices, we greatly appreciate our spotters assisting us in the field and describing to us what is happening.



To Be Added To The DX HONOR ROLL or Update
Your Number, Please Contact
Ernest Kraus KD2EAV
meanddelcanotc@verizon.net



Name/Callsign	DXCC
Bill Grim W0MHK	352
Dave Strout W2YC	349
Edward De Fonzo W2DE	339
Darrell Neron AB2E	337
Bob Pantazes W2ARP	300
Gary Castellini N2IEC	288
Vinnie Sallustio N4NYY	276
Sheldon Parker K2MEN	274
Jim Wright N2GXJ	272
John Hill W2HUV	271
Ken Denson WB2P	248
Tony Starr K3TS	247
Dennis Sandole K2SE	231
Eric Morris N2BRJ	166
Art Strong KA0WS	163
Howard Marder WA2IBZ	160
Steve Farney W2SEF	147
Phil Nunzio WA3RGY	144
Ben Johnson NE2R	134
Rich Subers W2RHS	133
Bart Kleczynski AC2PT	124
Marc Federici WM2Y	117
Chuck Capasso WB2PGE	104
Harry Strahlendorf W3DNQ	103
Jim Clark KA2OSV	87
Updated As Of 10/22/2025	

*Hmm...It's Saturday and you want to know if someone is at the
Clubhouse? Why not call and find out!*

W2MMD Clubhouse : 856-244-6914

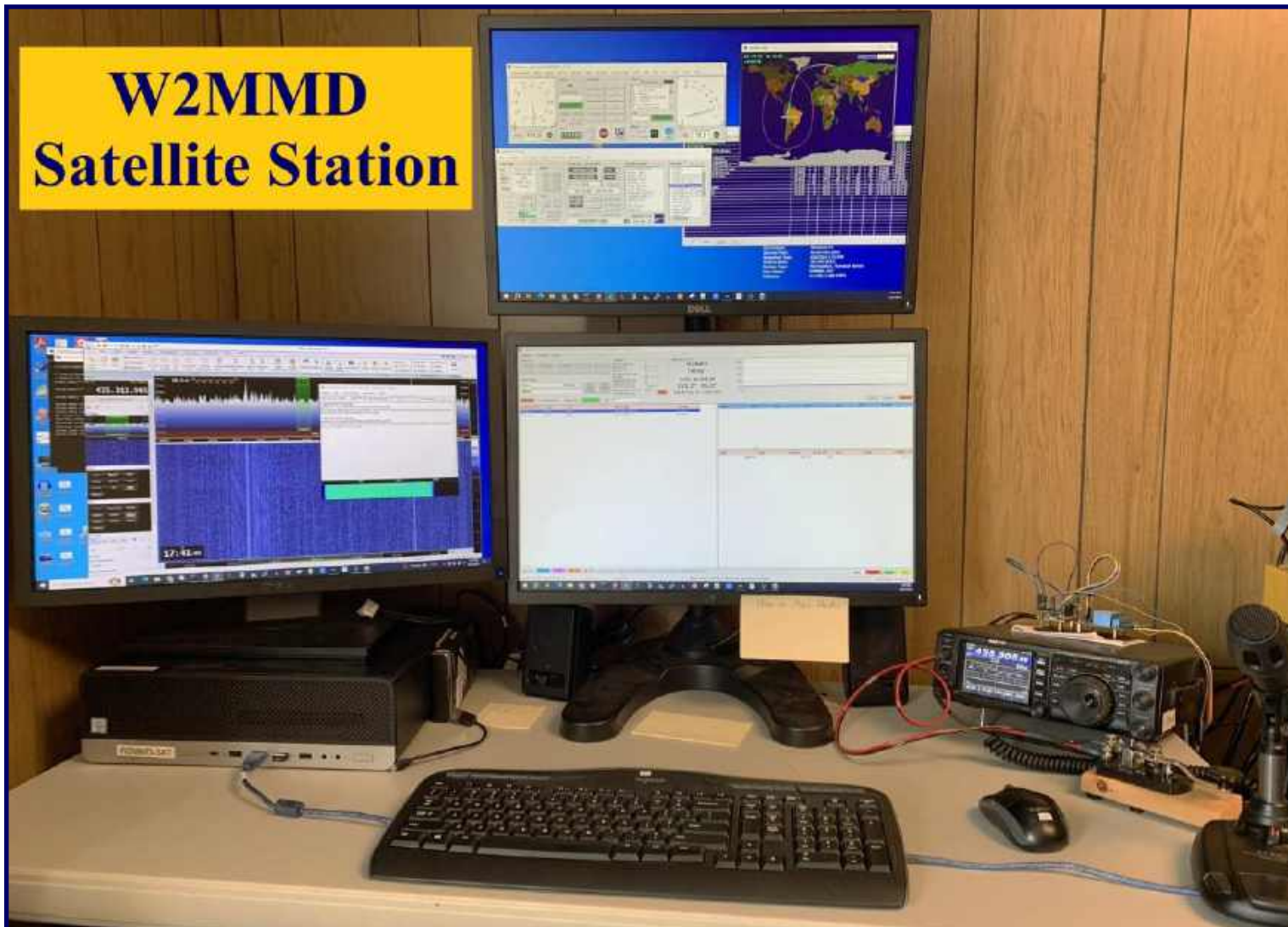
If no one answers, call Jennifer at 867-5309



Another FREE Clubhouse Resource Available To All Club Members

Training May Be Required : See Jon Pearce WB2MNF For Details

W2MMD Satellite Station



Seven-year-old Gertrude Takagi took a different approach to this year's summer break!

She studied for the amateur radio Technician Class license and, on August 9, 2025, she passed! She is now officially known as KM7BYE! Her father Mark, AI7DG, said she is proud of her accomplishment and has been beaming since passing the Element 2 exam on her first attempt. "It took her a lot of dedication and hard work to learn that much material in the summer between first and second grade," he added. There are now three hams in the family including her mother, Delia, N7YUM.

Article Credit : The ARRL Letter for August 14, 2025 - www.arrl.org



November Birthdays

*Congratulations To Our Members Who Are
Celebrating A Birthday This Month*

Joseph Albanese KE2DYX
Greg Anderson KE2FAS
Norman Coltri K2NRC
Robert Durham W2RAD
Robert Harrison WA3KOL
Robert Keogh KD2NEC
Ernest Kraus KD2EAV
Charles Lanard KD2EIB
Howard Marder WA2IBZ
Earl Moore KC2NCH
Miroslaw Radon KE2AEW
Cory Sickles WA3UVV (President 1993)
Richard Subers W2RHS
Martin Wilt W2ILT



In Memoriam : November Birthdays

Henry Basch N2DJN
Alva Bishoff W8JJG (Charter Member)
Peter Butler WB2B
Glenn Farnsworth K2EHM
Robert Fields KC6AOH
John Fisher Jr K2JF (President 1988)
Elwood Frantz Sr K4HKU
(President 1960, Charter Member)
Ernest Garside WA2TDI
Russel Glans N2ASV (President 1983)
George Hankins N2CFW
Charles Jenkins III W2OGZ
Frank King WA2WGA
Andrea Logan KB2ZWK
Ray Martin W2RM (President 1979)
Eleanor Mattison N2JXS
James McDonald Sr N2AIV
Robert Nicotera KB2ERL
Hugh Turnbull W3ABC
Edward Vickner Jr K2ZE
Paul Walton W2YNR (President 1964)



CrossTalk Submissions

This is your Club Magazine. Make use of it.

If you have stories or photos of your hobby that you would like to share with the Club, please do so! We will keep covering all of the GCARC events, but it is also nice to get those personal perspectives to include in every issue. Connecting through experiences is what makes the Gloucester County Amateur Radio Club a **REAL** Club.

All submissions, queries, comments, and editorials should be addressed to :
Jeff Garth WB2ZBN at [djgrath1 <at> gmail <dot> com](mailto:djgrath1@gmail.com)

Submission deadline for the December 2025 issue : Thursday, November 20, 2025

Club Website www.w2mmd.org

Club E-Mail Reflector : GCARC <at> Mailman <dot> QTH <dot> Net

Announced DX Operations : November 2025

www.ng3k.com/Misc/adxo.html

From The Shack of Bill Feidt NG3K : www.ng3k.com

November		NG3K	NG3K	NG3K	NG3K	NG3K
2025 Nov01	2025 Nov06	Palau	T88HR	JH1MLO (B/d)	OPDX 20250603	By JH1MLO fm Koror I (OC-009, PJ77fi); 75-6m; SSB
2025 Nov01	2025 Nov22	Falkland Is	VP8THW	LoTW	TDDX 20250919	By DL7HW; 20 17 15 12 10m; SSB FT8; 10w
2025 Nov03	2025 Nov20	Chatham I	ZL7	Club Log OQRS	OPDX 20250727	By LZ1GC as ZL7/LZ1GC fm IOTA OC-038 (AE16ug); 160-6m; CW SSB FT8 FT4; QSL via LZ1GC direct
2025 Nov03	2025 Nov27	Lesotho	7P8EA	HB9CCS	TDDX 20250930	By HB9CCS fm Thaba Tseka (KG40hl); 15m; SSB (21.223 MHz) CW (21.050 MHz), perhaps 17 12 10m; 100w; EF wire
2025 Nov20	2025 Nov30	San Andres I	5J0EA	LoTW	DXW.Net 20250903	By EA7BF EA7FPG EA7JW EA7ATX fm IOTA NA-003 (EK92dm); 160-10m; CW SSB + digital
2025 Nov20	2025 Dec03	Bonaire	PJ4KV	DL6KVA	DXW.Net 20250927	By DL6KVA; HF; CW
2025 Nov20	2025 Dec31	Namibia	V51WH	DK2WH	OPDX 20250903	By DK2WH fm nr Omaruru; 160-6m, incl 60m; QRV for CQWW DX RTTY using V55Y; to continue until Mar 24, 2026
2025 Nov22	2025 Dec05	Vanuatu	YJ0GC	Club Log OQRS	OPDX 20250727	By LZ1GC; 160-10m, incl 60m; CW SSB FT8 FT4; QSL via LZ1GC direct
CQ Worldwide DX Contest, CW (Nov 29-30, 2025) Check here for pericontest activity too.						
2025 Nov30	2025 Dec12	St Martin	TO9W	LoTW	DXW.Net 20250324	By W9MR W9AP K9EL N9LQ K9KE; 160-10m; CW SSB FT8 FT4 FT8; QSL via Club Log OQRS

Also for your convenience, there is a direct link to NG3K on our website. Click on the NG3K DX Page.

November 2025 CrossTalk : Learning Stuff! Building Stuff! Doing Stuff! TOGETHER! 53

North American QSO Party CW 2025
August 03, 2025

Call : K3TS
Operator (s) : K3TS
Station : K3TS

Class : Single Op Assisted LP
QTH : WPA
Operating Time (hrs) : 10
Location : USA

Summary :

Band	QSOs	Mults
------	------	-------

160 :	8	8
80 :	188	42
40 :	221	53
20 :	126	41
15 :	51	24
10 :	1	1

Total : 595 169
Total Score : 100,555

Club : Frankford Radio Club 047
Team : FRC Team Efficiency

Comments :

Pretty good for a summer session, my best one so far. As with most NAQPs, it started out slow and got going good just before my 10 hours was up! Worked the West Coast on 40m while it was still daylight out, as 40 was good this time. I even managed to grab 8 mults on 160m by force feeding my 80/40 dipole using my big DenTron tuner, since the 160 inverted L is down for rebuilding, and mowing of the radial field. I plan to have it back online by the end of next month. Thanks to all for the QSOs, and maybe we will work you on the 16th in the NAQP SSB. Until then, 73. de K3TS

WAE DX Contest CW 2025
August 09, 2025

Call : AB2E
Operator (s) : AB2E
Station : AB2E

Class : Single Op HP
QTH : SNJ
Operating Time (hrs) : 2
Location : USA

Summary :

Band	QSOs	QTCs	Mults
------	------	------	-------

80 :	2	4	8
40 :	31	23	69
20 :	6	8	6

North American QSO Party CW 2025
August 03, 2025

Call : NE2R
Operator (s) : NE2R
Station : NE2R

Class : Single Op Assisted LP
QTH : NJ
Operating Time (hrs) : 5
Location : USA

Summary :

Band	QSOs	Mults
------	------	-------

80 :	12	0
40 :	180	4
20 :	82	2

Total : 274 80
Total Score : 21,920

Club : Frankford Radio Club 048

ARS Spartan Sprint 2025
August 05, 2025

Call : W2TEF
Operator (s) : W2TEF
Station : W2TEF

Class : Single Op QRP
QTH : NJ
Operating Time (hrs) : 1
Location : USA

Summary :

Band	QSOs
------	------

40 :	4
------	---

Total : 4 Weight (lbs) 1.0625 049
Total Score : 3.76

Comments :

QRP-Labs QMX, Talentcell battery, VK3IL pressure paddle, ear buds

Total : 41 35 83
Total Score : 6,142

Club : Frankford Radio Club 050

Comments :

Terrible condx, worst ever for this contest.

North American QSO Party SSB 2025
August 17, 2025

Call : AB2E
Operator (s) : AB2E
Station : AB2E

Class : Single Op Assisted LP
QTH : NJ
Operating Time (hrs) : 4.5
Location : USA

Summary :

Band	QSOs	Mults
------	------	-------

80 :	78	25
40 :	33	29
20 :	62	32
15 :	30	19
10 :	2	2

Total : 205 107
Total Score : 21,935

Club : Frankford Radio Club 051

Team : FRC Team Alpha

Comments : Team Alpha

North American QSO Party SSB 2025
August 17, 2025

Call : K3TS
Operator (s) : K3TS
Station : K3TS

Class : Single Op Assisted LP
QTH : WPA
Operating Time (hrs) : 9
Location : USA

Summary :

Band	QSOs	Mults
------	------	-------

160 :	3	3
80 :	91	24
40 :	244	38
20 :	162	38
15 :	86	27
10 :	14	7

Total : 600 137
Total Score : 82,200

Club : Frankford Radio Club 052

Team : FRC Team Kilo

Comments :

Propagation was decent, but precipitation static in the afternoon, and lightning static in the evening, made it very difficult to hear some of the weaker signals at times. I had some really good runs though, which was quite fun, but I had to quit before my time was up because I needed to get up early on Sunday. Thanks to all who called in, and I am already looking forward to the next NAQP in January. 73 for now. de K3TS

World Wide Digi DX Contest 2025
August 17, 2025

Call : AB2E
Operator (s) : AB2E
Station : AB2E

Class : SO/Single Xcvr LP
QTH : SNJ
Operating Time (hrs) : 2.5
Location : USA

Summary :

Band	QSOs	Mults
------	------	-------

20 :	36	16
15 :	8	8
10 :	3	2

Total : 46 25
Total Score : 3,075

Club : Frankford Radio Club 053

Comments :

Callsign : AB2E

Contest : WWDIGI

Band	Mode	QSOs	Pts	Mlt	Pt/Q
14	FT4	36	90	16	2.5
21	FT4	7	24	7	3.4
28	FT4	1	3	1	3.0
28	FT8	2	6	1	3.0
Total	Both	46	123	25	2.7

Score : 3,075

1 Mult = 1.8 Q's



November 2025

+ YBDXPI FT8 Contest	0000Z, Nov 1 to 2359Z, Nov 2
+ Silent Key Memorial Contest	0600Z-0859Z, Nov 1
+ IPARC Contest, CW	0600Z-1800Z, Nov 1
+ UK/EI DX Contest, SSB	1200Z, Nov 1 to 1200Z, Nov 2
+ ARRL Sweepstakes Contest, CW	2100Z, Nov 1 to 0300Z, Nov 3
+ IPARC Contest, SSB	0600Z-1800Z, Nov 2
+ EANET Sprint	0800Z-1200Z, Nov 2
+ High Speed Club CW Contest	1400Z-1700Z, Nov 2
+ Classic Exchange, Phone	1400Z, Nov 2 to 0800Z, Nov 3 and 1400Z, Nov 4 to 0800Z, Nov 5
+ K1USN Slow Speed Test	0000Z-0100Z, Nov 3
+ ICWC Medium Speed Test	1300Z-1400Z, Nov 3
+ OK1WC Memorial (MWC)	1630Z-1729Z, Nov 3
+ ICWC Medium Speed Test	1900Z-2000Z, Nov 3
+ RSGB 80m Autumn Series, Data	2000Z-2130Z, Nov 3
+ Worldwide Sideband Activity Contest	0100Z-0159Z, Nov 4
+ ARS Spartan Sprint	0100Z-0300Z, Nov 4
+ ICWC Medium Speed Test	0300Z-0400Z, Nov 4
+ Phone Weekly Test	0230Z-0300Z, Nov 5
+ A1Club AWT	1145Z-1300Z, Nov 5
+ CWops Test (CWT)	1300Z-1400Z, Nov 5
+ Mini-Test 40	1700Z-1759Z, Nov 5
+ VHF-UHF FT8 Activity Contest	1700Z-2100Z, Nov 5
+ Mini-Test 80	1800Z-1859Z, Nov 5
+ CWops Test (CWT)	1900Z-2000Z, Nov 5
+ UKEICC 80m Contest	2000Z-2100Z, Nov 5
+ Walk for the Bacon QRP Contest	0000Z-0100Z, Nov 6 and 0200Z-0300Z, Nov 7
+ CWops Test (CWT)	0300Z-0400Z, Nov 6
+ CWops Test (CWT)	0700Z-0800Z, Nov 6
+ NRAU 10m Activity Contest	1800Z-1900Z, Nov 6 (CW) and 1900Z-2000Z, Nov 6 (SSB) and 2000Z-2100Z, Nov 6 (FM) and 2100Z-2200Z, Nov 6 (Dig)
+ SKCC Sprint Europe	2000Z-2200Z, Nov 6
+ NCCC FT4 Sprint	0100Z-0130Z, Nov 7
+ Weekly RTTY Test	0145Z-0215Z, Nov 7
+ NCCC Sprint	0230Z-0300Z, Nov 7
+ K1USN Slow Speed Test	2000Z-2100Z, Nov 7
+ PODXS 070 Club Triple Play Low Band Sprint	0000Z, Nov 8 to 2359Z, Nov 10
+ FISTS Saturday Sprint	0000Z-2359Z, Nov 8
+ WAE DX Contest, RTTY	0000Z, Nov 8 to 2359Z, Nov 9
+ ARRL EME Contest	0000Z, Nov 8 to 2359Z, Nov 9
+ 10-10 Int. Fall Contest, Digital	0001Z, Nov 8 to 2359Z, Nov 9
+ JIDX Phone Contest	0700Z, Nov 8 to 1300Z, Nov 9
+ SKCC Weekend Sprintathon	1200Z, Nov 8 to 2400Z, Nov 9
+ OK/OM DX Contest, CW	1200Z, Nov 8 to 1200Z, Nov 9
+ CQ-WE Contest	1900Z-2300Z, Nov 8 (CW/Digital) and 0100Z-0500Z, Nov 9 (Phone) and 1900Z-2300Z, Nov 9 (Phone) and 0100Z-0500Z, Nov 10 (CW/Digital)
+ AWA Bruce Kelley 1929 QSO Party	2300Z, Nov 8 to 0300Z, Nov 10 and 2300Z, Nov 15 to 0300Z, Nov 17
+ FIRAC HF Contest	0700Z to 1700Z, Nov 9
+ K1USN Slow Speed Test	0000Z-0100Z, Nov 10
+ 4 States QRP Group Second Sunday Sprint	0100Z-0300Z, Nov 10
+ ICWC Medium Speed Test	1300Z-1400Z, Nov 10
+ OK1WC Memorial (MWC)	1630Z-1729Z, Nov 10
+ ICWC Medium Speed Test	1900Z-2000Z, Nov 10
+ Worldwide Sideband Activity Contest	0100Z-0159Z, Nov 11
+ ICWC Medium Speed Test	0300Z-0400Z, Nov 11
+ DARC FT4 Contest	1900Z-2029Z, Nov 11
+ Phone Weekly Test	0230Z-0300Z, Nov 12
+ A1Club AWT	1145Z-1300Z, Nov 12
+ CWops Test (CWT)	1300Z-1400Z, Nov 12
+ VHF-UHF FT8 Activity Contest	1700Z-2100Z, Nov 12
+ Mini-Test 40	1700Z-1759Z, Nov 12
+ Mini-Test 80	1800Z-1859Z, Nov 12
+ CWops Test (CWT)	1900Z-2000Z, Nov 12

November 2025 Contest Calendar - Continued on page 57

November 2025 Contest Calendar - WA7BNM Contest Calendar : www.contestcalendar.com

November 2025 Contest Calendar - Continued from page 56

+ RSGB 80m Autumn Series, SSB	2000Z-2130Z, Nov 12
+ CWops Test (CWT)	0300Z-0400Z, Nov 13
+ CWops Test (CWT)	0700Z-0800Z, Nov 13
+ NCCC FT4 Sprint	0100Z-0130Z, Nov 14
+ Weekly RTTY Test	0145Z-0215Z, Nov 14
+ NCCC Sprint	0230Z-0300Z, Nov 14
+ K1USN Slow Speed Test	2000Z-2100Z, Nov 14
+ Ham Spirit Contest	0700Z, Nov 15 to 0659Z, Nov 16
+ All Austrian 160-Meter Contest	1600Z-2359Z, Nov 15
+ REF 160-Meter Contest	1700Z-2400Z, Nov 15
+ South American Integration Contest CW	1800Z, Nov 15 to 2100Z, Nov 16
+ Feld Hell Sprint	1900Z-2059Z, Nov 15
+ RSGB 1.8 MHz Contest	2000Z-2300Z, Nov 15
+ ARRL Sweepstakes Contest, SSB	2100Z, Nov 15 to 0300Z, Nov 17
+ FISTS Sunday Sprint	0000Z-2359Z, Nov 16
+ Homebrew and Oldtime Equipment Party	1300-1500Z, Nov 16 (40m) and 1500-1700Z, Nov 16 (80m)
+ Run for the Bacon QRP Contest	2300Z, Nov 16 to 0100Z, Nov 17
+ K1USN Slow Speed Test	0000Z-0100Z, Nov 17
+ ICWC Medium Speed Test	1300Z-1400Z, Nov 17
+ OK1WC Memorial (MWC)	1630Z-1729Z, Nov 17
+ ICWC Medium Speed Test	1900Z-2000Z, Nov 17
+ RSGB FT4 Contest	2000Z-2200Z, Nov 17
+ Worldwide Sideband Activity Contest	0100Z-0159Z, Nov 18
+ ICWC Medium Speed Test	0300Z-0400Z, Nov 18
+ Phone Weekly Test	0230Z-0300Z, Nov 19
+ A1Club AWT	1145Z-1300Z, Nov 19
+ CWops Test (CWT)	1300Z-1400Z, Nov 19
+ Mini-Test 40	1700Z-1759Z, Nov 19
+ VHF-UHF FT8 Activity Contest	1700Z-2100Z, Nov 19
+ Mini-Test 80	1800Z-1859Z, Nov 19
+ CWops Test (CWT)	1900Z-2000Z, Nov 19
+ Walk for the Bacon QRP Contest	0000Z-0100Z, Nov 20 and 0200Z-0300Z, Nov 21
+ NAQCC CW Sprint	0130Z-0330Z, Nov 20
+ CWops Test (CWT)	0300Z-0400Z, Nov 20
+ CWops Test (CWT)	0700Z-0800Z, Nov 20
+ NTC QSO Party	1900Z-2000Z, Nov 20
+ NCCC FT4 Sprint	0100Z-0130Z, Nov 21
+ Weekly RTTY Test	0145Z-0215Z, Nov 21
+ NCCC Sprint	0230Z-0300Z, Nov 21
+ K1USN Slow Speed Test	2000Z-2100Z, Nov 21
+ LZ DX Contest	1200Z, Nov 22 to 1200Z, Nov 23
+ North American SSB Sprint Contest	0000Z-0400Z, Nov 23
+ K1USN Slow Speed Test	0000Z-0100Z, Nov 24
+ ICWC Medium Speed Test	1300Z-1400Z, Nov 24
+ QCX Challenge	1300Z-1400Z, Nov 24
+ OK1WC Memorial (MWC)	1630Z-1729Z, Nov 24
+ ICWC Medium Speed Test	1900Z-2000Z, Nov 24
+ QCX Challenge	1900Z-2000Z, Nov 24
+ Worldwide Sideband Activity Contest	0100Z-0159Z, Nov 25
+ ICWC Medium Speed Test	0300Z-0400Z, Nov 25
+ QCX Challenge	0300Z-0400Z, Nov 25
+ SKCC Sprint	0000Z-0200Z, Nov 26
+ Phone Weekly Test	0230Z-0300Z, Nov 26
+ A1Club AWT	1145Z-1300Z, Nov 26
+ CWops Test (CWT)	1300Z-1400Z, Nov 26
+ Mini-Test 40	1700Z-1759Z, Nov 26
+ Mini-Test 80	1800Z-1859Z, Nov 26
+ CWops Test (CWT)	1900Z-2000Z, Nov 26
+ UKEICC 80m Contest	2000Z-2100Z, Nov 26
+ CWops Test (CWT)	0300Z-0400Z, Nov 27
+ CWops Test (CWT)	0700Z-0800Z, Nov 27
+ RSGB 80m Autumn Series, CW	2000Z-2130Z, Nov 27
+ NCCC FT4 Sprint	0100Z-0130Z, Nov 28
+ Weekly RTTY Test	0145Z-0215Z, Nov 28
+ NCCC Sprint	0230Z-0300Z, Nov 28
+ K1USN Slow Speed Test	2000Z-2100Z, Nov 28
+ CQ Worldwide DX Contest, CW	0000Z, Nov 29 to 2400Z, Nov 30

CHERRY VALLEY MODEL RAILROAD CLUB

Holiday Open House!

Grace Church • 7 East Maple Ave.
Merchantville, NJ 08109

Sat, Oct 18 & Nov. 15
Sat. & Sun, December 6 & 7.
Sat. & Sun, January 3 & 4, 10 & 11
Hours: 12-3pm

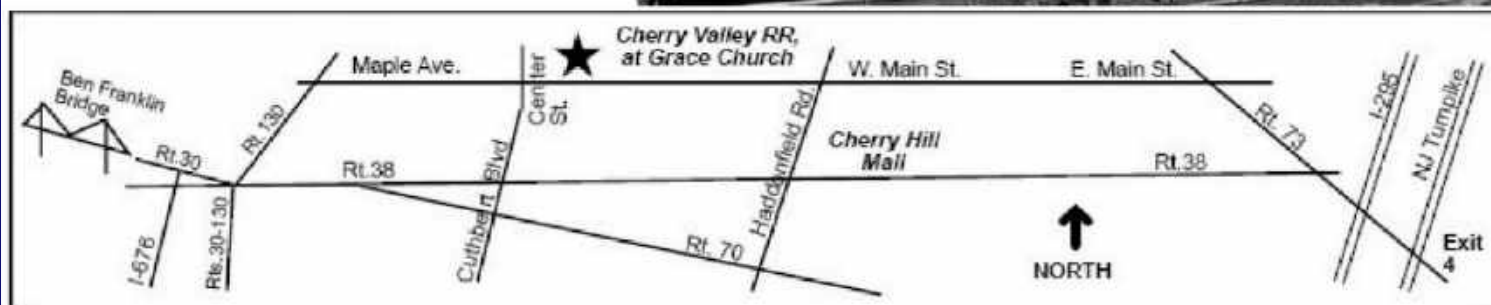
Please note the club layout is not wheelchair accessible

Free admission! Bring the Family.

For information, please contact:
Doug Shultz 609-923-6161



Follow us on Facebook:
**Cherry Valley
Model Railroad**
for photos, videos,
events & news!



2025 Club Committees

Standing Committees

Budget
 Constitution & By-Laws
 Education
 Field Day
 Hamfest
 Health, Welfare, & Silent Keys
 Hospitality
 Membership & Membership Badges
 Publicity
Repeaters
 Volunteer Examiner Liaison
 W2MMD Clubhouse Site

Committee Chairs

John O'Connell K2QA
 Ron Block NR2B
 Chris Prioli AD2CS
 Jim Wright N2GXJ
 Ron Block NR2B
 Bill Price NJ2S
 Jeff Garth WB2ZBN
 Chris Prioli AD2CS
 Mike Resnick N2WOQ
Open Chair
 Chris Prioli AD2CS
 Al Arrison KB2AYU

Activity Committees

Awards & Certificates
 Club Photographer
 Club Publications & Historian
 Contests
 GCARC Foxhunts
 GCARC Picnic
 GC-ARES Emergency Coordinator
 Holiday Dinner Party
 Membership Roster Database
 Nominations
 Programs : General Membership Meetings
Radio Nets
 Technical (Tech Saturday, TechNets)
 W2MMD License Trustee
 W2MMD Special Event Station

Committee Chairs

GCARC Board of Directors
 Phil Nunzio WA3RGY
 Jeff Garth WB2ZBN
 Tony Starr K3TS
 Jim Wright N2GXJ
 Frank Romeo N3PUU
 Bob Keogh KD2NEC
 Beth Barnish KB2EAL
 Jeff Garth WB2ZBN
 Jon Pearce WB2MNF
 Ron Block NR2B
Open Chair
 Jon Pearce WB2MNF
 Darrell Neron AB2E
 Mark Gottlieb KK2L

GCARC <at> Mailman <dot> QTH <dot> Net e-mail reflector guidelines

1. **No attachments** (e.g. pictures, files) are allowed on the reflector.
2. If you have Club-related pictures that you would like to share, you can send them to the webmaster, he will put them on the website and will send out a general e-mail to all the members.
3. Otherwise, the pictures will have to be sent to the members' addresses.
4. URLs/Hyperlinks are acceptable on the reflector.
5. Do not send any messages with e-mail addresses in the **BCC (Blind Carbon Copy)** field. The message will be rejected. Use only the **To:** or **CC:** fields.
6. Members are subscribed to the reflector using the member's e-mail address from the roster database. You must use that address when sending an e-mail via the reflector.
7. If you use another address on the reflector, the message will get rejected or "*bounced*", because the reflector does not recognize that address. Whenever a message sent to reflector is rejected or "*bounced*" for various reasons, the administrator has to log-in to the Mailman.QTH website and approve the message.

The W2MMD Repeaters

2 Meter Repeater

Output : 147.180 MHz

Input : 147.780 MHz

Offset : +600 kHz - PL : 131.8 Hz

(Conventional FM plus C4FM Capability)

EchoLink : W2MMD-R

70 cm Repeater

Output : 442.100 MHz

Input : 447.100 MHz

Offset : +5 MHz - PL : 131.8 Hz

(Conventional FM plus C4FM Capability)

The above repeaters are both
located in Pitman, NJ
GPS : 39.728481°, -75.131088°

1.25 Meter Repeater

Output : 224.660 MHz

Input : 223.060 MHz

Offset : -1.6 MHz - PL : 131.8 Hz

Location : Sewell, NJ

GPS : 39.746738°, -75.077094°

SKYWARN™ Net

Sunday @ 1930 : 147.180 MHz Repeater

Gloucester County ARES Net

Sunday @ 2000 : 147.180 MHz Repeater

GCARC TechNet ZOOM Forum

Available Every Monday @ 1930 Hours

Join ZOOM Meeting Link :

<https://bit.ly/3K8bWwj>

Tuesday Afternoon 2M Net @ 1200 Hours

Monday & Thursday Night 40M Net

1930 Hours

7.170 MHz (Plus or Minus 5 or 10 kHz)

Thursday 2M Net @ 2000 Hours

**All 2 Meter Nets Are Also On EchoLink :
W2MMD-R**

Meeting Calendar

General Membership Meeting
Wednesday, November 05, 2025
1900 Hours

Pfeiffer Community Center
Simulcast Live on ZOOM

Meeting ID : 914 7364 1808

Passcode : 843147

Join ZOOM Meeting Link :
<https://bit.ly/3Pt4dLO>

Board of Directors Meeting
Wednesday, November 19, 2025
1900 Hours
W2MMD Clubhouse

*“Ask not what your Club can do for you,
Ask what you can do for your Club”*
- KA2OSV

*“There’s More To Ham Radio Than
You Can Possibly Do!”*
- K3TS

*** Badges ***

Need a new or replacement badge
Contact “The Badge Man”

Chris Prioli AD2CS
chris@ad2cs.com

Question Pool Answers : E4C01:D; E4C02:A; E4C03:C; E4C04:D; E4C05:B; E4C06:D; E4C07:B; E4C08:D; E4C09:C; E4C10:C; E4C11:D; E4C12:C; E4C13:D; E4C14:C